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and

JOURNAL OF RURAL ART AND RURAL TASTE.

The National Ignorance of the Agricultural Interest.

TO general observers, the prosperity of the United States in the great interests of trade, commerce, manufactures, and agriculture, is a matter of every-day remark, and general assent. The country extends itself from one zone to another, and from one ocean to another. New states are settled, our own population increases, emigration pours its vast tide upon our shores, new soils give abundant harvests, new settlements create a demand for the necessaries and luxuries of life provided by the older cities, and the nation exhibits at every census, so unparalleled a growth, and such magnificent resources, that common sense is startled, and only the imagination can keep pace with the probable destines of the one hundred millions of Americans that will speak one language, and, we trust, be governed by one constitution, half a century hence.

As a wise man, who finds his family increasing after the manner of the ancient patriarchs', looks about him somewhat anxiously, to find out if there is likely to be bread enough for their subsistence, so wise statesmen, looking at this extraordinary growth of population, and this prospective wealth of the country, will inquire, narrowly, into its productive powers. He will desire to know whether the national domain is so managed that it will be likely to support the great people that will be ready to live upon it in the next century. He will seek to look into the present and the future sufficiently to ascertain whether our rapid growth and material abundance, do not arise almost as much from the migratory habits of our people, and the constant taking-up of rich prairies, yielding their virgin harvests of breadstuffs, as from the institutions peculiar to our favored country.

We regret to say, that it does not require much scrutiny on the part of a serious inquirer, to discover that we are in some respects like a large and increasing family, running over and devouring a great estate to which they have fallen heirs, with little

or no care to preserve or maintain it, rather than a wise and prudent one, seeking to maintain that estate in its best and most productive condition.

To be sure, our trade and commerce are pursued with a thrift and sagacity likely to add largely to our substantial wealth, and to develop the collateral resources of the country. But, after all, trade and commerce are not the great interests of the country. That interest is, as every one admits, agriculture. By the latter, the great bulk of the people live, and by it all are fed. It is clear, therefore, if that interest is neglected or misunderstood, the population of the country may steadily increase, but the means of supporting that population, (which can never be largely a manufacturing population,) must necessarily lessen, proportionately, every year.

Now, there are two undeniable facts at present staring us Americans in the face—amid all this prosperity: the first is, that the productive power of nearly all the land in the United States which has been ten years in cultivation, is fearfully lessening every season, from the desolating effects of a ruinous system of husbandry; and the second, is, that in conseqnence of this, the rural population of the older states is either at a stand still, or it is falling off, or it increases very slowly in proportion to the population of those cities and towns largely engaged in commercial pursuits.

Our census returns show, for instance, that in some of the states, (such as Rhode Island, Connecticut, Delaware and Maryland,) the only increase of population is in the *towns*—for in the rural population there is no growth at all. In the great agricultural state of New-York, the gain in the fourteen largest towns is sixty-four per cent, while in the rest of the state it is but nineteen per cent. In Pennsylvania, thirty-nine and a quarter per cent in the large towns, and but twenty-one per cent in the rural districts. The politicians in this state, finding themselves losing a representative in the new ratio, while Pennsylvania gains two, have, in alarm, actually deigned to inquire into the growth of the agricultural class, with some little attention. They have not generally arrived at the truth, however, which is, that Pennsylvania is, as a state, much better farmed than New-York, and hence the agricultural population increases much faster.

It is a painful truth, that both the press and the more active minds of the country at large, are strikingly ignorant of the condition of agriculture in all the older states, and one no less painful, that the farmers, who are not ignorant of it, are as a body, not intelligent enough to know how to remedy the evil.

"And what is that evil?" many of our readers will doubtless inquire. We answer, the miserable system of farming steadily pursued by eight-tenths of all the farmers of this country, since its first settlement: a system which proceeds upon the principle of taking as many crops from the land with as little manure as possible—until its productive powers are exhausted, and then —— emigrating to some part of the country where they can apply the same practice to a new soil. It requires far less knowledge and capital to wear out one good soil and abandon it for another, than to cultivate a good soil so as to maintain its productive powers from year to year, unimpaired. Accordingly, the emigration is always "to THE WEST." There, is ever the Arcadia of the American farmer; there are the acres which need but to be broken up by the plough,

to yield their thirty or forty bushels of wheat to the acre. Hence, the ever full tide of farmers or farmers sons, always sets westward, and the lands at home are left in a comparatively exhausted and barren state, and hence, too, the slow progress of farming as an honest art, where every body practices it is like a highway robber.

There are, doubtless, many superficial thinkers, who consider these western soils *exhaustless*—"prairies where crop after crop can be taken, by generation after generation." There was never a greater fallacy. There are acres and acres of land in the counties bordering the Hudson—such counties as Dutchess and Albany—from which the early settlers reaped their thirty to forty bushels of wheat to the acre, as easily as their great grand-children do now in the most fertile fields of the valley of the the Mississippi. Yet these very acres now yield only twelve or fourteen bushels each, and the average yield of the county of Dutchess—one of the most fertile and best managed on the Hudson, is at the present moment only six bushels of wheat to the acre! One of our cleverest agricultural writers has made the estimate, that of the twelve millions of acres of cultivated land in the state of New-York, eight millions are in the hands of the "skinners," who take away everything from the soil, and put nothing back; three millions in the hands of farmers who manage them so as to make the lands barely hold their own, while only one million of acres are well farmed, so as to maintain a high and productive state of fertility. And as New-York is confessedly one of the most substantial of all the older states, in point of agriculture, this estimate is too flattering to be applied to the older states. Even Ohio—newly settled as she is, begins to fall off per acre, in her annual wheat crop, and before fifty years will, if the present system continues, be considered a worn out soil.

The evil at the bottom of all this false system of husbandry, is no mystery. A rich soil contains only a given quantity of vegetable and mineral food for plants. Every crop grown upon a fertile soil, takes from it a certain amount of these substances, so essential to the growth of another crop. If these crops, like most of our grain crops, are sent away and consumed in other counties, or other parts of the counties—as in the great cities, and *none of their essential elements* in the way of vegetable matter, lime, potash, &c., *restored to the soil*, it follows as a matter of course, that eventually the soil *must* become barren, or miserably unprofitable. And such is, unfortunately, the fact. Instead of maintaining as many animals as possible upon the farm, and carefully restoring to the soil in the shape of animal and mineral manure, all those elements needful to the growth of future vegetables, our farmers send nearly all their crops for sale in cities—and allow all the valuable animal and mineral products of these crops to go to waste in those cities.*

"Oh! but," the farmer upon worn out land will say, "we cannot *afford* to pay for all the labor necessary for the high farming you advocate." Are you quite sure of that assertion? We suspect if you were to enter carefully into the calculation, as your neighbor, the merchant, enters into the calculation of his profit and loss in his system of trade, you would find that the difference in value between one crop of 12 bushels and

* In Belgium—the most productive country in the world, the urinary excrements of each cow are sold for $10 a year and are regularly applied to the land, and poudrette is valued as gold itself.

another of 30 bushels of wheat to the acre, would leave a handsome profit to that farmer who would pursue with method and energy, the practice of never taking an atom of food for plants from the soil in the shape of a crop, without, in some natural way, replacing it again. For, it must be rememembered, that needful as the soil is, every plant gathers a large part of its food from the air, and the excrement of animals fed upon crops, will restore to the soil all the needful elements taken from it by those crops.

The principle has been demonstrated over and over again, but the difficulty is to get farmers to *believe* it. Because they can get crops, such as they are, from a given soil, year after year, without manure, they think it is only necessary for them to *plant*—Providence will take care af the harvest. But it is in the pursuit of this very system, that vast plains of the old world, once as fertile as Michigan or Ohio, have become desert wastes, and it is perfectly certain, that when we reach the goal of an hundred millions of people, we shall reach a famine soon afterwards, if some new and more enlightened system of agriculture than our national "skinning" system, does not beforehand spring up and extend itself over the country.

And such a system can only be extensively disseminated and put into practice by raising the *intelligence* of farmers generally. We have, in common with the Agricultural Journals, again and again pointed out that this is mainly to be hoped for through a *practical* agricultural education. And yet the legislatures of our great agricultural states vote down, year after year, every bill reported by the friends of agriculture to establish such schools. Not one such school, efficient and useful as it might be, if started with sufficient aid from the state, exists in a nation of more than twenty millions of farmers. "What matters it," say the wise men of our state legislatures, "if the lands of the Atlantic states are worn out by bad farming? Is not the GREAT WEST the granary of the world?" And so they build canals and railroads, and bring from the west millions of bushels of grain, and send not one fertilizing atom back to restore the lands. And in this way we shall by-and-bye make the fertile prairies as barren as some of the worn out farms of Virginia. And thus "the sins of the fathers are visited upon the children, even to the fourth generation!"

NOTES ON THE HABITS OF THE CURCULIO.

BY J VAN BUREN, CLARKSVILLE, GA.

MR. DOWNING—For the last six or eight years I have been endeavoring to cultivate plums and nectarines, amongst other fruits; but from the depredations of that pest, the curculio, I have never yet had the satisfaction to have one ripen. On the opening of the present season, I determined to ascertain more of the history, habits, and if possible, some better remedy for the evil than was yet known. If the results of the numerous experiments I have run "the Turk" through, will be of any service to the readers of the Horticulturist, they are at your service.

DESCRIPTION OF THE DRAWINGS.

Fig. 1.

Fig. 1.—Common Curculio Magnified.

Fig. 2

Fig. 2.—Pupa Magnified.

Fig. 2. Pupa in the progress of transformation, showing the incipient wings, wing covers, legs and mandibles turned under the throat.

Fig. 3. Head and mandibles as used in biting the fruit to deposit the ova, showing the mandibles open.

Fig. 4. Curculio of the natural size.

Fig. 3.

Fig. 4.

In the first place, I filled a glass tumbler about half full of earth; on this I placed one nectarine and two Chickasaw plums, which had been bitten by the curculio, and tied a piece of paper over the top closely. The plums and nectarine decayed or rotted in the course of a few days, when the larvæ left them, and were seen moving about on the top of the earth for a few hours, and then disappeared. The next day, on examination, I found them deposited at the bottom of the tumbler, where they had excavated a small cavity in the earth about the size of a pea. In this situation I watched them from day to day, by looking through the bottom of the tumbler, where I could perceive them wriggling about. In about thirty days they began to disappear, and in a day or two after I opened the tumbler, and turned out the earth on a paper, and picked up thirteen lively curculios! Some of them had assumed the perfect size and color of those found upon the trees, whilst some others, of a more recent date or change, were of a reddish or mahogany color—whilst one of them was in a state or proccss of change, from a larvæ to a perfect curculio. Enclosed, I send you some of them in their three different stages, also some magnified drawings taken at the time. I immediately had a hole dug beneath a plum tree in the orchard, and at the depth of about a foot, found his excellency alive, and in fine condition for continuing his depredations.

I was somewhat surprised at the manner of transformation from the larvæ to the perfect insect. I had expected it to first have entered the pupa state, but such is not the case, as you will perceive on examining specimen No. 3, if it reaches you in good order. The legs, wings, and probocis, or more properly mandibles, appear to grow out from the larvæ, while the body contracts to the size of the perfect insect, no skin or shell is formed or cast off in the course of the change. I trust this experiment will satisfy all as to the manner of its propagation, as well as to the time.

On enclosing the before mentioned fruits, I did not count the number of punctures on them, so as to ascertain how many eggs had been deposited in each puncture; and that you may form an opinion of their numbers and industry here, I will observe that I have seen nectarines scarified in at least fifty places on one nectarine. This, in connection with the fact, that probably several broods or generations are propagated in every season, will give you an idea of their rapid increase, and consequent ravages. I shall preserve some of the insects during the coming winter, by placing them in earth in bottles, and ascertain whether any further changes take place, either as to size or habits.

I will now proceed with a history of my experimental remedies, but will remark at the

outset that I am *hors du combat* in all. I have made no impression, whatever, upon the grand rascal. I commenced my operations in the spring, by mixing pulverised cobalt in honey and water, and hanging it in cups in the trees, and by spreading some of it on the branches, and sometimes on the fruit, and I cannot say that I ever caught three curculios in all my cups, nor that one ever tasted that I spread upon the trunk or limbs. But I can say, if I did not kill the curculios, I killed all the trees upon which I put it to any extent, so *they* will not be tormented any more. I next put a ring of tar and grease around the trunks of some others, so as to stick them fast if they attempted to crawl up the trunk. Never did one put his foot in it, that I could discover. Next I caught some of them on a cloth, by shaking the trees, and placed them in bottles, and fed them on green plums, some dipped in a decoction of tobacco, some in that of elder-bark and leaves, others in penny-royal, and so on—all which they ate with a relish, as well as deposited their eggs in them.

In short, everything that I have tried has failed to arrest them in their wickededness, except shaking them from the trees, which is rather a *chinquapin business*, as we say out here. I have a fine nectarine tree standing near the kitchen door, under which the little niggers play and dance from morning till night, but not one nectarine has ever ripened upon it yet, nor do I think ever will, until some other remedy than those now known, is found. The only reason why trees growing over brick walks, and near doors, have succeeded at times, is from the fact that the insect is very shy. I have caught them in the act of puncturing the fruit, and on endeavoring to pick them off, they would roll themselves up and drop off like a 'possum.

All that promises to be of any service, that I am able to conceive of, is to destroy the young fruit as fast as it falls from the trees; and that is a forlorn hope here, where peach trees grow almost indigenously. The fruit should be gathered up and destroyed at least once every day, as the larvæ soon leaves it after it falls to the ground. Keeping poultry amongst the trees does no good, as the worm, immediately on leaving the fruit, crawls underneath it, and there burrows in the earth. [But the poultry "makes a business" of devouring the insect the moment it emerges, and therefore, where there are plenty of chickens—there are plenty of plums. Ed.] Hogs will doubtless be of much service, if permitted to run amongst the trees, but the fruit that first falls is so small that much of it is not eaten by them, and besides, some of the plums do not fall at all—but on the larvæ leaving them, dry up and remain upon the tree during the entire season. We encourage and protect the birds all we can about the orchard, (the Jay excepted,) who charges so much for his services that we cannot afford to tolerate him, for when our grapes ripen he claims the whole; so you will perceive all is failure thus far with your humble servant. I have thought it best to give you a history of all my failures, that others may not travel over the same ground, and trust that they will do the same with theirs; and I have no doubt but that perseverance will yet discover a remedy or specific cure for this pest.

We have two other varieties of this insect here, which I intended to have sent you, but they have accidentally escaped. One is quite small, and the other three or four times the size of the common kind. Should I be able to get hold of either of them again this season, I will send them.

J. Van Buren.

Clarksville, Ga., July 15, 1851.

Review.

"NOTES ON NORTH AMERICA, *Agricultural, Economical and Social*," by PROFESSOR JOHNSTON. Edinburgh and London, 1851.

IT has ever been the fortune of the people of the United States, to be patronised by an itinerating race of English, Scotch, or Irish travelers, who, in "a laudable spirit of inquiry," come over among us, as they themselves asserted, "to judge candidly, and without prejudice, of our people and their institutions;" and after receiving the hospitalities and attentions of those to whom they had condescended an acquaintance, and fatigued with their exactions, to return home, and most heartily, and with a right good will, abuse us, always in general, and quite frequently, in particular, in a written book of travels. It were bootless either to classify or name the shoal of scribblers running down the catalogue, from "TOMMY MOORE, the Irish Rhymster," to CHARLES DICKENS, of "International Copy-right" notoriety—all equally celebrated, if not in the literary merit of the books themselves, yet altogether so for the kind temper and generous motives of their philanthropic labors!

The literary foreigner has threaded our country to ascertain "who reads an American book?"—the politician and pamphleteer, to earn his pension at home, in the noble object of spying out the nakedness of the land in our lack of institutions "time honored in Old England;"—a vulgar, gossipping old woman, to gather material for a lively and scandalous book;—and a clever, termigant play-actress, to get a rich husband, and "kick up a fuss generally,"—which in one way or other they have managed to accomplish, no doubt with singular satisfaction to themselves, and the exceeding joy of sundry among their equally honest and self-satisfied country people at home.

Such travelers were chiefly of the common line; traveling to write, and writing to *pay*. But we have now to notice one of another kind, *ostensibly* a traveler in the way of his profession. Agriculture and her sister arts, within the last twenty years, have attracted a larger share of the public attention than formerly, in a great portion of the United States, as partaking in the general progress of the day; and among the British authorities which our inquiring cultivators have sought to instruct them in their labors, and aid in their investigations, the published writings of a Scotch Professor—Johnston by name—in a small Chemico-Agricultural department of a university, so styled, in the city of Durham, have been consulted. Awakened to a notion that where a plausible book had made some impression for our benefit, the *author* of that book could make a more emphatic impression by his own presence, the managing department of the New-York State Agricultural Society, extended, some three years since, a sort of invitation, or hint, to the aforesaid Professor, that he should come over to the United States and deliver a course of lectures on "Chemistry as applied to Agriculture," *for a compensation*, which, after a sufficient amount of professional coquetry on his own part, he accepted. In due time, therefore, it became known that in the month of August, of the year 1849, "JAMES F. W. JOHNSTON, M. A., F. R. S. S. L. E., & F. G. S., C. S., &c. Reader of Chemistry and Mineralogy in the University of Durham"—we quote the title page of his book—arrived at Halifax, and spending some time in the Provinces of Nova Scotia, and New Brunswick, in four weeks thereafter entered the United States, and arrived in the city of Syracuse, in the state of New-York, on the 11th day of September; and on the 13th, at the great annual Fair and Cattle Show of the New-York State Agricultural Society, "at three P. M.,

delivered my address, in a large open tent, to several thousand people, by whom it was warmly and kindly received."

Now, we intend to deal fairly with Professor JOHNSTON. A man of respectable attainments—a chemist by profession—a lecturer in a school of some local celebrity, by occupation—and in the connection which his subject of teaching has to the agriculture of his own country, a farmer and a horticulturist, in theory at least,—and as a matter of course, supposed to be a gentleman in manners, we had, in our simplicity, supposed that we should obtain much information at his hands. We hoped—although against heavy odds, we admit—that our country, in the observations made upon it by an intelligent and truth loving spirit, would be fairly examined—so far as examined at all, and that if he presumed to indite a book of two stout volumes upon us and our institutions, both our people and their country would, at least, be treated with justice. It will be seen in what way and manner all these have been done.

We say *presume* to write a book upon the people of the United States and its institutions. Not that these subjects are so lofty and abstruse that they may not be touched by the pen of a foreigner, and that foreigner not a first class man either, by any means; but it is a matter of some presumption we humbly submit, for a *closet* man, cooped up for the greater part of his professional life within the walls of an ancient Saxon town, to take a broad leap across the Atlantic, "steam" over a portion of the bays and rivers, and lakes; trundle over a few of the railways of a country thousands of miles in extent; dive into a chemical laboratory here; attend a private entertainment there; partake in a set, or a casual conversation elsewhere; and make a *thorough* examination of nothing,—all within the space of four months, and then square himself deliberately to the composition of a work which he is to put forth with all the authority and self-complacency of a teacher in the sciences, physical, political, and ethical, as applied by a people, and to a country he had never before seen! This, at least, would be called presumption in an American who should *dare* to take such liberty with Old England, or any part of Great Britain, although somewhat *less* extensive in territory and population, than the United States. But it may be called *condescension* by the modest author himself, to the less enlightened curiosity of his "trans-atlantic cousins."

To be precise and in order: Professor JOHNSTON arrived at Halifax on the 7th day of August, 1849. On the 4th of September he took the steamboat at St. John, and arrived the following morning, at Portland, in the state of Maine, in time for the railway to Boston, where he arrived at 2 P. M., and after two full hours of keen observation, (a large share of it at the dinner table,) in that promising little town, again took the cars for New-Haven, where he arrived at 11 o'clock the same night.

"In this rapid run through New-England, only three things made a permanent impression on my mind. These were, first, that the general rudeness of the people which travelers speak of [what travelers? we would humbly inquire,] is not perceptible in New-England *generally*. *It may be more strikiag in the western states.*" But after all, our Professor doubts that even in Old England, if *all* classes of travelers were indiscriminately mixed up by fifties and sixties together in a train of cars, the passengers *might not behave so well* as those of New-England do. A precious, although a grudging confession, truly. "The second thing was the numerous country boxes or cottages, of all fashions and sizes, with their white painted walls and green jalousies, which skirted the railway during the last twenty miles of our ride to Boston. This is a peculiarly English feature, and indicates the existence among our trans-atlantic kindred, of that love of green fields, and of a quiet country life which characterizes so much our own island-home." Surprising! did our tra-

veled author suppose that the untutored Yankees dwelt in wigwams outside the cities, and lived by hunting, instead of growing farm crops, garden fruits, and vegetables? "And my third observation was, that though the drouth of Nova Scotia and New-Brunswick had extended into Maine, its effects became less perceptible as I advanced westward into the other New-England states, till, in Connecticut, the fields looked as beautifully green as I had seen them last at the mouth of the Mersey." It must have been a "permanent impression" truly, that in a range of four hundred miles, from the fog-ridden banks of Nova Scotia, and through a declining latitude of five degrees, he should have discovered that New-Haven weather had been quite as irreverent in its imitation of a "drouth" in the provinces, as its people are regardless of some of the practices of their provincial "kindred."

Spending four days in New-Haven, which gives him material for some eight pages of comment on what he saw in and around the city, and Connecticut in general, he started on the 10th for Syracuse in company with Professor NORTON. On his way up the Housatonic valley to Albany, whirling along in a rapid railroad train, he remarks on the "drift" and geological formation of the country, which he obtained, of course, from his intelligent informant and traveling companion. At Albany a stay of one night is made, and in the next half day's ride up the Mohawk, his geological observations continue, coupled with a dash of agricultural remark, and a running commentary now and then, neither new nor profound, on soils, climate, and crops. By way of variety, also, are interspersed the stereotyped remarks of foreigners upon the odd names of our towns and villages, and some equally original reflections upon our manner of elections, fondness of titled names, and popped corn, in particular. Rather annoyed at the accession of Mr. CLAY, to the traveling train at Utica, our author proceeds in his commentaries through Rome, not "the Niobe of nations," but little Rome, on the Mohawk, then full of enthusiastic curiosity for a sight at the great statesman; then to Verona, where no "two gentlemen" bid him "good morrow;" thence to Syracuse, where he arrives "at half-past three, distance 178 miles from Albany."

As Syracuse—to which place he had been invited by the State Agricultural Society, to deliver the usual address made before the multitude assembled to attend its annual jubilee—is to be a *point* in his travels and observations, a full chapter of thirty-three pages is devoted to the discussion of sundry matters and things appertaining thereto, and the country by which it is surrounded. As it was the theatre of his own personal display, too, for the time, we shall follow him somewhat closely for the two and a-half days—we like to be precise in some things—that he remained. With a like *originality* of remarks as before, he finds that Syracuse is "a new city of 16000 inhabitants, large hotels, numerous churches, and *skeleton* streets, which, if its prosperity continue, will soon be built up," —"so late as six years ago, the wilderness still surrounded the residence of the mayor —to whose hospitality I was indebted during my stay at Syracuse—where his garden now extends, and plum and peach trees and vines are in full and luxurian bearing."

Our author's notes are *accurate*, no doubt; but we would give a trifle to learn the wonderful method of transforming a wilderness "into the sites of noble mansions and dwellings, with highly ornamental gardens, towering shade trees, and paved streets, which extend far beyond the fine premises of Mr. LEAVENWORTH, within the brief period of *six* years, and meekly inquire whether, if the word, twenty, were prefixed to the "six," it would not be nearer the mark? Such is our own recollection.

Professor JOHNSTON goes with his attentive friend, Mr. NORTON, into the show yard. Things here are, very naturally, compared with the show of the English Royal Agricul-

tural Society, and as they agree with that, is the exhibition more or less deserving. Some things he commends, other things furnish him a text for commentary, and as the people, in a country where the best of unimproved lands can be had for fifteen to twenty dollars an acre, have not as yet under-drained all their swamps, at an expense of twenty to thirty dollars the acre, he has made up his mind (another *original* idea) that as "yet in New-England and New-York, there is no such thing as local attachment—the love of a place because it is a man's own—generally speaking every farm, from Eastport in Maine, to Buffalo on Lake Erie, is for sale!" Accommodating people, most truly! Thence follows a homily on the superior production of land where the owner of the soil and its cultivator, hold the relative attitudes of landlord and tenant, upon which his remarks are quite as profound as a stickler for the cast-off feudal usages of Europe may be supposed, winding up by an equivocal compliment to "our respected Yankee cousins."

"In the New-England states and in New-York the Devon blood prevails. Most of the stock are *grades*, as they are called, or crosses of the pure Devon bull with the older stock of the country, which is originally of mixed English and Dutch of various kinds. The cows exhibited were nearly all Devons, and there was a beautiful Devon bull in the yard which had been bred in Canada. In the Western and South-Western states the Short-horn blood predominates, and of this blood there were some good specimens exhibited." p. 165, vol. 1. An astute *agricultural* professor, most truly, who, in the Provinces, a fortnight before this, affected to be a judge of cattle! The veriest tyro on earth, who had ever slept a night on a stock farm in "New-England or New-York," would deserve to have his ears soundly boxed for a remark betraying such profound ignorance and stupidity. Did Mr. JOHNSTON go into the cattle quarter of the show grounds at all? Or if he did, had he knowledge in live stock enough to discriminate between the scores of Short-horns, the Herefords, the Devons, the Ayrshires—his own country-kine, and the various *grades* of almost every intermixture that he could not but see there? Or was his information drawn from some one quite as ignorant and unobserving as himself? There were some 400 cattle exhibited on the Syracuse show-ground, and there were not a score of *Devon cows* among them all, although of Devons, including bulls, cows, heifers, and calves, there was a fine collection: but there were at least three Short-horns to one Devon, and the best show of Short-horns yet exhibited in the state, and several of them recently imported from England. Equally correct is the remark that "in the New-England States and New-York the Devon blood prevails." In those states not one animal in twenty has a *trace* of Devon blood in its veins, as Devon cattle are *now* understood. Both Devons and Short-horns are occasi nally found in New-England, and so are Ayrshires, Alderneys, and Herefords, in their purity; and so also are there many grade cattle of those bloods; but, in comparison with the whole, they are few, like our author's facts, and far between. And so with the Short-horns in "the Western and south Western states," towards which he never advanced beyond the foot of Lake Erie, where he asserts that "the Short-horn blood predominates." In regard to New-England and New-York he must have made his very accurate observations as he "steamed, and railed" through that country; and a most convenient clairvoyance undoubtedly helped him to the like accurate information regarding the Western and South western cattle.

Our horses "are in reality too light for heavy farm-work." Our author believes that "when the period arrives for deeper ploughing and more extensive cultivation of heavy land, a heavier and stronger stock of horses will be necessary." When he demonstrates to us that the clumsy draught horse of Clydesdale, or the snail-paced cart-horse of Lancashire, with the same weight of carcass applied to the work, and the same amount of food,

and the same manual assistance, can plow *two acres* of strong land *in one day*, and plow it as deep and as well as a team of "limber" New-York horses, we shall give more weight to his authority. The time has not *yet* arrived for a "*Britisher*"—so *self-styled*, only—to read the Yankee a lesson in the breeding of *useful* horses.

In some other branches of the exhibition at Syracuse, Professor JOHNSTON was quite as discriminating as in the stock department. "Farm and dairy produce, however, and fruits, receive much attention from the New-York State Society, and had an appropriate place assigned to them under the tents and sheds which were scattered on the grounds." In his very *particular* notice of the fruits—and what we have quoted is all of it—we have much to admire in the extent of his information. An unsophisticated man would have supposed that a tent, regal in size, 120 by 80 feet in area, containing shelves placed amphitheatre-like the full length of its oval sides, and filled with thousands of the choicest specimens of apples, pears, quinces, grapes, peaches, plums, and melons, *all grown in the open air*, and of the most exquisite flavor, garnished with beautiful collections of flowers, and by their tempting luxuriance attracting the attention of a dense crowd during the three days of their exhibition, would have excited a remark beyond simply naming their presence in general terms. But true to the instinctive taste of his own foggy hills, where not a thing of them all is grown out of doors, he no doubt regarded them with the like affection of the old laird at the sight of the sugar-plums: "Hoot mon! and what is all this baubee trumpery to a bicker of kail broose?" In his after observations, our traveler remarks somewhat upon our apple culture, none of which remarks are new, and part of them incorrect. Of apples, he says, "those varieties which are best for the table are unfit *alone* to make a palatable cider." "Where ignorance is bliss, 'tis folly to be wise," said a much abler man than Professor JOHNSTON, and it were equally wise for his own credit that *he* should speak of that only of which he knew something. He has however introduced the extensive orchards of Mr. PELL, and their management, but draws no conclusions. In this place, he says that Mr. P. has 2,000 Newtown Pippin apple trees in full bearing. In the second volume he states, that "Mr. PELL has 20,000 apple trees, *chiefly* Newtown Pippins." We should really like to know *how many* apple trees Mr. PELL *has* got in his orchard, so that the disputed question of two thousand, or twenty thousand—for there is *some* difference in the number—may be set at rest.

Discharging creditably, though in manner and taste quite mistakenly, his public duties at Syracuse, he extends his rambles to the fine farm of Mr. GEDDES, a few miles out of town, which gives him opportunity for some geological remarks upon soils—all borrowed—and modes of agriculture, not new. He then leaves in the railway for Buffalo on the 15th, after a two and a half days' sojourn in the richest agricultural county of the state. "Introduced to a gentlemanly-looking physician," he soon apologizes for the rudeness of an answer which he gave him to a question which we are quite sure no "gentlemanly-looking" man of any profession would have addressed to him; and then a commentary on manners and language in general, in which neither the words "Britisher" nor "Transatlantic Cousins," occur. JOE SMITH and company, of the Mormon faith, now come in for a share of his reflections, followed up by a fling at the fanaticism of his followers, in which he candidly admits that a large accession to their force had come from England to sustain the open polygamy of SMITH, when living, and BRIGHAM YOUNG, now chief apostle and leader of the tribe. Agriculture—of which every idea that he has, as applied to the region of which he discourses, is given by some previously introduced acquaintance, or fellow passenger in the cars—receives a part of his attention; and politics, forms of govern-

ment, existing institutions, and miscellaneous matters, follow, as drawn from, but not credited to, the books and statistical tables of which he is possessed.

Hailing from Buffalo, where our traveler spent an *entire* night, he dashes, *in imagination*, away to the far west, and by aid of the aforesaid statistical tables and maps, and geographies, and Lyell's, and other's American Geology, talks of Wisconsin, and the country about Lake Superior, the "Hog crop," and "Cattle crop" of Ohio, and settles down with a surprisingly "clever" act of "a gentleman introduced to him at Syracuse, but whose name he did not know," who invited him to spend the night at his house, two miles out of the city, which he declined, owing to the brief stay he should make, but who, nevertheless, furnished him unsolicited, with free lodgings at the "American Hotel." This is noted "as an instance of the proneness of our *trans-atlantic cousins* to the virtue of hospitality," as also the truth of his own reiterated remark, that "blood is thicker than water."

Stepping in, while at Buffalo, at a butcher's, after asking him sundry questions, which were duly answered, and then answering the butcher's questions in turn, he writes,—"Well, sir, says he, (the butcher,) we live in a great country here—we are a great people." Now we dare risk our veracity against that of Professor JOHNSTON, that the aforesaid butcher never said any such thing; or, if he did say so, that he was a foreigner of British birth. "It is unpleasant to a stranger to be always called upon to admire and praise what he sees in a foreign country; and it is a part of the perversity of human nature to withhold, upon earnest request, what, if unasked, would be freely and spontaneously given." Then a fling at the "brag and swagger among individuals in the United States." An *amiable* man, too, is Professor JOHNSTON.

Leaving Buffalo on the morning of the 16th, for the Falls of Niagara, he tarried a full twenty-four hours at the latter place. He viewed the falls from both sides of the river, and treats us to a few trite remarks of moderate admiration, and a borrowed cut of the geological formation of the rocks at that point. He then hurries off to Lewiston, on the 17th, and takes the boat, where "we *steamed* through the mouth of the Niagara river." We really wish, for the reputation of all concerned, that our Professor had informed us whether it was himself and his companions who did so much *steaming*,—whether it was simply the tea-kettle *steaming* up the water for their whiskey-toddy, or, only the innocent boat itself, driving her paddle-wheels by aid of steam through the water—for this word "steaming" has sometimes an equivocal meaning on both shores of Lake Ontario, among "our trans-atlantic cousins."

On board the boat on the way to Oswego, another conversation was had "with a practical farmer from Syracuse." The result of this conversation was, a *drawn* conclusion as to the profits and hopes of farming as a business. Yet he was impressed with the opinion that the New-York farmers knew much more of the geological formation of their own soils, than the English farmers did of theirs. From six to half past ten o'clock in the morning, our author waited at Oswego, where he found that "the flouring mills were the chief source of the prosperity of the town." The extensive commerce with the upper lakes and with Canada, which that thriving town enjoys, he did not hear of. Thence to Sackett's Harbor, which "shows nothing to attract attention, beyond its hotel, and some signs of increase in size." From Sackett's Harbor "we steamed" again through the Thousand Islands, to Kingston, Upper Canada, and "at 6 P. M. we landed on the pier." "I almost felt myself at home again, as I set my foot on shore in sight of the British flag." Here in "the kind welcome of a Kingston family," and under the ample folds and broad protection of "the British flag," he luxuriates for a full week—a

longer time than he spent in the whole region of the United States from New-Haven to Niagara, in which prolific tour he drew the material for half a volume of speculation and theory, on matters and things in general. We here leave the author for several months, to talk to his countrymen at home, as he may, of the advantages of "the Provinces" over the United States, regretting only, as we close this part of his travels, that his good taste could not have dictated a better story than the shabby slur upon the housekeeping virtues of our Yankee women, which he has chronicled: "I'll go over to Canada for a wife when I marry," said a young South Shore farmer to his friend. "When I come home at night she'll have a nice blazing fire on, and a clean kitchen, and a comfortable supper for for me; but if I marry a New-Yorker, it 'll be, when I come home, 'JOHN, go down to the well for some water, to make some tea,' or 'JOHN, go and bring some logs to put on the fire, to boil the kettle.' No, no; a Canadian woman 's the wife for me." Vol. 1, p. 263. His "South Shore" hero probably wanted a *drudge*, instead of a companion.

On the 24th of the following December, our author again finds himself, amid the discomforts of winter travel, entering the north-east point of Maine, in a journey from St. John to Boston and Albany, at which latter place he was engaged to deliver a course of lectures on "the general relations of Science to Agriculture," before the members of the Legislature, and the New-York State Agricultural Society. On the 28th he is again domiciled at the hospitable quarters of his young friend, Professor NORTON, in New-Haven. Here he makes a stay of several days; and although he observes a studied silence regarding it, we have no doubt he was introduced by Mr. NORTON to several of the learned and accomplished faculty of Yale College, had free access to the extensive and richly stored cabinets of Professor SILLIMAN, and that all the geological, mineralogical and chemical treasures of that highly reputable University were opened to him; but whether he felt bound by considerations of delicacy to say nothing of either, or all of them, or whether he found himself, on comparison with men of *real* attainments, altogether out of position, is no business of ours; yet, as a characteristic acknowledgment of the kind attentions and hospitality he *must* have received at New-Haven, he sneakingly records a dirty slander of FENIMORE COOPER, an American author, on the meanness of Connecticut hospitality! And it is with such creeping inuendoes at his heels, that we have followed him thus far on his journey in the United States. At so fitting an opportunity we cannot forego the relation of a private anecdote, slightly touching the *good manners* of this Agricultural Professor: During his stay at one of our cities, where he gave lectures, he was invited by a gentleman residing some miles out of town, to dine with a party, among which were several gentlemen of distinction, and an ex-president of the United States. A highly respectable Scotch gentleman, resident in the neighborhood, was of the party, and presuming that both he, and Mr. JOHNSTON, would be mutually pleased at meeting, as fellow countrymen, their host introduced them to what "he hoped," as he led them together, "would be an intimate acquaintance." But our PROFESSOR, after slightly noticing his countryman, abruptly turned away, and continued a conversation with his host. Indignant that so marked an insult should be given to an esteemed guest and neighbor, simply because he was a countryman of his own, by Mr. JOHNSTON, our host immediately turned to the other, and in company with the ex-president, who had also witnessed the petty slight, renewed the conversation with marked attention, and left the consciously embarrassed PROFESSOR to the enjoyment of his own affected superiority!

Mr. JOHNSTON arrived at Albany on the 4th day of January, 1850. He staid three weeks, and delivered his course of lectures, which, as we have not them under notice, we shall pass. Here, with a ride or two out of town, a visit to the Shakers at Niskayu-

na, and his usual reference to statistical tables, geological reports, speeches of legislators, and pamphlets, he makes up sundry sage commentaries and conclusions on American government, institutions, religion, life, and manners; some of which are sensible enough when simple of solution, and others ridiculously absurd, as touching the true results which a fair mode of reasoning would draw from his premises. Here is a specimen: He attended the annual meeting of the State Agricultural Society, at which the usual business of the Society was transacted. "I was struck with the gravity and decorum with which the discussion was carried on, and with the apparent self-possession of the speakers. It is partly to the general acknowledgment of *no higher rank than his own*, that the absence of *our insular* nervousness in the American speaker, is to be ascribed; but partly, also, *to the undisciplined and uncontrolled way in which children are brought up.*"(*!*) He also *coins* another story, in which a lady is brought in, to prove (to us,) the utter emptiness of his conclusion. Our professor is also *great* on American slavery, which he discusses with about the same amplitude of reasoning, that certain other foreign philanthropists indulge, and reads us frequent lectures on the astounding benefits of *free-trade*, as exhibited in the recent striking and disinterested examples of the English government, for our "trans-atlantic" imitation!

Jan. 26, at Philadelphia. Along the *railway route*, and *in the depth of winter*, another geological notice of the country—*original in himself*, no doubt! In this city he was invited by Professor HARE to attend a "very agreeable *whister*(*!*) party,"—a new social invention we fancy— probably *chemical* or *geological*, as we do not know that name in any other of the sciences. We are happy to learn that the *green sands* and phosphates of lime of New-Jersey, have struck his attention—for his skill in such subjects we have a true respect—and that his examinations confirm the opinions of our own chemists as to their permanent and great value to agriculture. At the Eutaw House—"Eutaw's Hotel,"—Baltimore, our PROFESSOR gives us an inkling into his gastronomic and convivial propensities, in the discussion of "Canvass-backs," and "Apple-toddy." A highly wrought recipe for making the latter is given, in which the virtues of a "*red-streak* apple, roasted before a *slow* fire, on a *China* plate," are a part of the process; but whether the compound is to be stirred with a *sharp* stick or a blunt one, we are not informed. This, he has discovered, although a winter, is not a *very* "slow" drink, and also that mint-juleps are a summer beverage, which the "jovial middle 'states men,'" and not the strait-laced temperance Yankees, had discovered to him!

Washington. Here again the guide books and the scribblings of foreign tourists, are emptied out upon his groaning table, for scissoring, clipping, and pasting. "Magnificent distances," the PRESIDENT, Congress, the Supreme Court, the public buildings, Southern Nullification, tariff, free-trade, as taught us by *English* policy, slavery, the public lands, and Smithsonian Institute, each, every, and all of them came under his emasculating pen, and are discussed with a self-complacency and decision from which there is no appeal. The only new subject of discussion is that of the Agricultural Bureau, in which, we regret to say, no *new* idea is advanced. But he is quite clear that two or three Republics, made out of our existing one, would be a wholesome improvement upon our present system; and the annexation of Cuba and Canada, he fears, would be *embarrassing* to our President and his Cabinet!

While in Washington, our friend made a detour down into "Old Virginia," where he "steamed" it—(what an inveterate toper the Professor has got to be!)—*eight miles* on the Potomac to Alexandria! And here the statistics again rattle like a hail shower about his ferocious goose quill. Slang words, political economy, rise, progress, and increase of

slavery, all jingle again in beautiful succession. We have a story about a lady and a "Britisher," and our unfortunate politics continue to annoy his chemico-agricultural head until he leaves the capitol, and again addresses himself to the north.

Arrived at New-York on the 5th February, our author adjusts himself to the settlement of the conflicting pretensions, between his own country and ours, to skill and superiority in the construction of Atlantic steamers, the commerce, manufactures, population, and prosperity of our great emporium, and makes up his mind that after all it is only a British town, manned and worked by British labor, supplied by British capital, and kept in this breathing world by British influence! Here the old files of statistics are unfolded, and their subjects again canvassed, during his six days stay, in which his agricultural researches are extended into the American Institute, and back into Mr. PELL'S apple orchard, the only one he appears yet to have heard of on this side the Atlantic.

February 11th. Back to Boston. His stay here, off and on, was now six weeks, having been engaged in giving a course of lectures at the Lowell Institute, on the "Relations of Science to Agriculture,"—a repetition of those delivered at Albany. His mind here seems to have been sorely exercised in comparing the Service and Liturgy of the Established Church in England with that of the United States, and especially in its application to the Unitarian faith, as if the latter doctrines were solely American, and had not been imported a century ago from England. The Mormons and their polygamy, again haunt his peace, and he is sadly puzzled to ascertain whether "their Senators and Representatives would bring their *harems* to Washington with impunity; and if one of their wives eloped to Boston, the husband could reclaim her without doubt, as he now does his slave—[the Mormons *do not* hold *slaves*, we believe,] all the laws of New-England against bigamy, notwithstanding?"

It were bootless to follow our erudite Professor through all the various topics which engage the remaining part of his time while in and around Boston. In the dead of winter, when he could make few or no personal observations upon the geology, or soils of the neighborhood, he draws upon the various surveys, and authors, which he found in abundant number around him; and his various disquisitions, and dissertations, of which we have many, are still taken from the statistics, and official reports of the Commonwealth, to neither of which does he give the slightest credit. In the large amount of this material which he has so unblushingly appropriated, we are reminded of that prince of critics, old JOHN DRYDEN, who, finding a plagiarist of remarkable dimensions, exclaimed in his indignation, "that instead of picking here, and stealing there, like a common literary mouser, he pounced down and appropriated the spoils of others with all the audacity of a conqueror!" Indeed, we think he shows a better taste in the selection of his subjects while at Boston, than at any other point in his travels; and possibly, had he remained some months longer, he might have informed himself into quite a tolerable train of extract. But we doubt whether, after all, they could have indicated other than the researches and notices of a remarkably small man. Had nature favored him with a modicum of the discrimination and modesty of a LYELL, and his own judgment furnished him with an equal disposition to investigate for himself upon the broad surface of our country, and to an equal extent that his own vanity and self-complacency permitted him to appropriate the not exceedingly well selected subjects from the toils of others, his own countrymen would be better instructed, and our respect for his rectitude of motive be enhanced.

His stories, by way of illustrating his conclusions, are absurd and pointless; his pickings, of matter poured forth in the bitterness of party feeling, out of newspapers, are malicious and false; and the occasional anecdotes which he chronicles, as told him in the

mischevious waggery of others, are so many Munchausens which prey upon his credulity. That he makes some sensible and proper remarks, and arrives at occasional right conclusions, is not denied; but the carping spirit in which he generally discusses his subjects, and the deprecatory approbation which he yields when he can no longer withhold it, are a lively testimony to the grudging temper in which he looks upon us and our country. We can afford to be criticised—abused, even—for we confess to many and frequent delinquencies—when necessary, and done with smartness and discrimination from the salient points of one's own observation; indeed a little wholesome castigation to our National self-complacency may be at times most wholesomely administered; but we choose that it be done by the hand of a master. For the donkey-like reproof of a quack and a bungler, we have no relish.

We sat down to these volumes of Professor JOHNSTON with the anticipation that in a man of pretended attainments in our own favorite science of agriculture, and its attendant pursuits, a traveler to some extent in the way of his profession, on the European Continent, and now in the maturity of his intellect and the vigor of his mind, coming to a country, certainly not without interest to an intelligent investigator of the natural sciences, to make his professional observations, and to select objects of interest and novelty for the instruction of his countrymen, we should find something both rich and rare. A reading of his books has, to be sure, discovered to us much in either; but we have risen from our search with the sorrowing conviction that what he has chronicled as rare, is not particularly rich, and whatever he has recorded as rich is not at all rare. Had he confined himself simply to his *professional*, labors and investigations, and they been *really* labors and investigations *of his own*, we doubt not he could have made up a volume of matter both interesting and instructive. In the United States was a fresh mine of vast resource, inviting both his chemical and his agricultural exploration. He chose to neglect these, to become philosopher, politician, and political economist; and on subjects upon which vastly abler foreigners than himself have preserved a discreet silence, or written but moderately well, he has poured out his half-pledged opinions with the flippancy, garrulity and emptiness of a Trollope, and a Fidler. A parting specimen we give in our traveler's visit to Springfield, when speaking of the national armory at that place. "Springfield, from its position as the place of meeting of so many railways, is remarkably well *chosen* as the site of a national arsenal. Weapons for 300,000 men can, upon the first telegraphic signal, be dispatched either up the Connecticut towards Lower Canada, through Albany towards the Lakes, or to the Atlantic shores northward by Boston, or southward by New-York." A *school boy* might have said this very prettily. But it so happens that this national armory was established by our government upwards of half a century ago, when Springfield was an obscure inland town, off from navigable waters, or easy communication, and for the very reason that it was so, and a long generation before either *railways* or *telegraphs* were known! The wisdom of Congress in this matter is therefore, as applied by our Professor, altogether apocryphal. The accident that Springfield lay in a central position, and on the best line of construction, made that town "the place of meeting of so many railways." The railways met the arsenal—not the arsenal the railways. Our Professor's sagacity in this matter equals that of his philosophic prototype, who acknowledged the great kindness of Providence in making the navigable rivers run by the great towns and cities, that the people who dwelt there might be accommodated in their shipping facilities!

But we tire of quotations, which might, of like character, be almost indefinitely extended from the two volumes before us. On the 26th March, Mr. JOHNSTON left Boston

for the valley of the Connecticut, visited Springfield, Northampton, Amherst, and Greenfield. "Greenfield is a small town, *new*, straggling, and unfinished, as *all* these country towns are." These Connecticut valley towns, we believe, are about *two hundred* years old! For the first time he now appears to be awake to the beautiful scenery of our country. In this jaunt he is received by every one on whom he calls, with courtesy and marked attention, and condescends to give a trifling credit for it. His manners r.end with the season, and probably had he sojourned during the summer among the Yankees, he might have become as agreeable a man as an unpolished manner, and an uncouth provincial accent in his language, would have permitted. He dashes on over the railway to Albany, stops a day there, and goes down the Hudson to Poughkeepsie in a steamboat, is disappointed in its scenery—sees nothing to admire, and, in a car ride along the banks of the river to New-York, makes up his mind that he "was not in a condition to form an adequate idea of what its beauties in its summer garb really are!"

From New-York to New-Haven, and thence to Boston. On the third day of April, A. D. 1850, Professor JOHNSTON leaves, for the last, as well as only time, we trust, the shores of America, for England. We owe an apology to the reader for spending so much time upon a subject so little to our taste as the one we have presented; but as we, in common with our agricultural and horticultural friends, had expected something in our own line, from one who made high pretensions while here to instruct us in things both new and important, we have noticed his book but to chronicle another instance of the sounding brass and tinkling cymbal that so often greet us from our "Cis-Atlantic" teachers. We have done it also as a thorough confirmation of the fact that a foreigner in "getting up" a book of travels on America, has but to "steam" it across the Atlantic, trundle a thousand or two miles over our railways, gather up half-a-dozen Champagne baskets of travels, pamphlets, official reports of Legislatures, and societies—this last not much matter what—hold a conversation now and then with an ostler, tide-waiter, or barkeeper, "steam" it home again with all possible despatch, and become a most accomplished "professor" of book-making on America! JEFFREYS.

THE VALUE OF GREEN-HOUSES TO INVALIDS.

BY DR. STEVENS, NEW-YORK.

WE ask the especial attention of readers interested in the subject, to the following remarks, by one of the most distinguished physicians in the country, on the sanitary effects of green-houses. At a moderate cost, many a family might enjoy the delightful bloom and fragrance of exotics in winter, with the satisfaction of providing for an invalid member of that family, the soothing influences of the air of Madeira or Cuba. In a public point of view the matter is even more important—as Dr. S. truly suggests. ED.

DEAR SIR: Having for many years suffered from a pulmonary complaint, I am led to avail myself of your Journal, to offer some observations on a subject lying mid-way between our respective callings. Some ten or twelve years since, in visiting the green-house of Mr. Niblo, then my neighbor in Broadway, during the winter, I found the atmosphere exceedingly congenial. It abated my cough, rendered the expectoration loose and easy, softened the skin, and induced a comfortable state of feeling, approaching to exhileration. Wishing to have such an atmosphere at command, I constructed a cold grapery, in which,

whenever it has been convenient, I have passed the hours of reading and study. The climate of a cold green-house, in a sunny day of the winter or spring, is a Florida climate, and is entirely different from that of an artificially heated atmosphere. I venture to recommend it under most circumstances, to pulmonary invalids, in preference to the more expensive plan of removal to the South, involving, as it does, much discomfiture, interruption of business, hazardous exposure, and entire separation from friends.

While on this subject, I am induced to speak of the importance of glass structures for convalescents in hospitals. The New-York Hospital has already been, and the Ward's Island Hospital will soon be provided with such structures, of which the importance can scarcely be over-estimated. Who that has noticed the instinctive desire of man and animals, to bask in the sun, will fail to appreciate the advantage of providing the means of such enjoyment for those who are able to leave a sick room.

And now, sir, I leave the matter in your hands. What men of wealth may do for themselves, and what the public may do for its charities, the public should do for the middling classes and the poor. They should establish winter gardens in all our great cities.

I am, &c. A. H. STEVENS.

Astoria, Long-Island, July 17, 1851.

THE ISABELLA GRAPE—ITS HISTORY, ETC.

BY L. F. ALLEN, BLACK ROCK, N. Y.

FRUITS—indeed anything which have become celebrated—are an interesting subject of history. Of such is the Isabella Grape, a *story* about which, many years ago—perhaps twenty—I chronicled in the Genesee Farmer, published in Rochester. As my attention was again called to the subject a day or two since, in a pleasant interview with my old friend and acquaintance, General JOSEPH G. SWIFT, long connected with our army, and for many years past with the Topographical Engineer Corps of the general government, and now a resident of Geneva, N. Y., I refer to it for the purpose of putting the record in a more enduring form in the pages of the Horticulturist.

I first knew the Isabella grape, when a boy, in Norwich, Connecticut, about the year 1817 or 18. It then grew in several gardens there, and from its great luxuriance, and the fine flavor of its fruit, I became exceedingly interested in its origin. The parent vine was traced to the garden attached to what was called the "VERNET House," which stood near what was then "the Landing," now Norwich city. Into that garden, some years before the late war with England, say 1807, 8, or 9, the grape was introduced by Mr. VERNET, a French West Indian, who built the house, and there resided several years. Where he brought the grape from was unknown; but as he was largely engaged in the West India trade, it was supposed he brought it from one of the French West India islands. The vine then had no other name there, than the "VERNET Grape." I have since grown it from cuttings obtained from the original stock in Norwich, and roots of the Isabella sent me from the Brooklyn nurseries, side by side; and the vines, in leaf, growth, habit, and fruit, were identical.

In the city of New-York, about 1825, or '6, I became acquainted with the *Isabella* Grape, and immediately recognised it as the VERNET Grape of Norwich. In 1828, the late WILLIAM PRINCE, nurseryman, of the Linnæan Garden, in Flushing, Long-Island, published "A Short Treatise on Horticulture," on page 51 of which occurs the following:

"*Isabella Grape.*—This is an American Grape, a native of Dorchester, South Carolina, and was introduced into this state by Mrs. ISABELLA GIBBS, the lady of GEORGE GIBBS, Esq., of St. Augustine, who then resided at Brooklyn, Long Island, and in honor of that lady, has been called Isabella Grape."

In his description of the grape, which follows, Mr. PRINCE further remarks: "This grape, of which but a single vine existed in *any garden* in 1816, and which I at that time met with in the possession of the gentleman before mentioned, (alluding to Gen. SWIFT,) and deemed worthy of a notice, and a name," &c.

In the recent conversation referred to with Gen. SWIFT, he remarked: "The Isabella Grape originated eight miles from Charleston, S. C., at GOOSE CREEK, in a garden. It is a hybrid between a *Burgundy* Grape, introduced by the early Hugenots, who settled in South Carolina, and the *Fox* Grape of that state. The Isabella Grape was taken from the garden where it originated, to Mr. N. SMITH'S plantation, on Cape Fear, in South Carolina, and from there was carried by Mrs. Col. GIBBS, to Brooklyn, N. Y. I afterwards purchased the residence and garden of Col. GIBBS, where I found the grape, and first introduced it to the late Mr. PRINCE. He proposed to name it after Mrs. SWIFT. I replied, No. Let justice be done; call it after her who introduced it here, Mrs. GIBBS—her name is ISABELLA, and the grape was so named."

Such, unquestionably, is the history of the Isabella Grape, so far as its introduction into Brooklyn, and its name is concerned. At what time the grape originated, or was *first known* in South Carolina, Genl. SWIFT has no knowledge. It may have been cultivated many years in the neighborhood of its origin; and from Charleston Mr. VERNET may have obtained it, as it has not since been known as a West India grape, and between Charleston and Norwich then, more than now, existed much commercial intercourse. Yet this is not certain. But *certain* it is, for near ten years—possibly more—the grape was known in Connecticut, before it was in Brooklyn. Genl. SWIFT also stated to me that he wrote an account of the grape and its introduction to Mr. PRINCE, for *Skinner's American Farmer*, published in Baltimore, in 1819 or '20.

To the above account, while in the mood, I will devote a moment to a brief

GOSSIP ON GRAPES.

Early in last October I spent a delightful week in Cincinnati. It was the week of their great State Cattle Show, their grand Horticultural Jubilee, and it was also a week of hospitality, of kindness, and polite attentions, from those residents with whom, together with some of my neighbors, and friends of my own state, I became acquainted. During our sojourn there, we visited the finest and most extensive vineyards in the neighborhood, Mr. LONGWORTH'S, Mr. BUCHANAN'S, Mr. ERNST'S, Mr. RESOR'S, and others. The luscious, large, plump, and wonderfully developed fruit of the Catawba, then in their full ripeness, excelled any *out-door* native grapes I ever beheld, not excepting the finest Isabellas of Long Island, or the Hudson valley—hardly excelled, indeed, by the Black Hamburgh of a hot-house; and the numerous vineyards of the Catawba, dotting the hillsides and valleys, from an area of a few rods, to fifteen acres in extent, around the city, to an eastern man, were truly a luxury to look upon. This, too, is the grand grape of the Ohio valley, and the only good *table* grape, except the Herbemont, which I found in the garden of Mr. LONGWORTH, that attracted my attention. The Herbemont is small, but of a delicious, mild and aromatic flavor; and from a sample of its wine, tasted at Mr. L.'s, it must become a valuable *wine* grape.

But in the Isabellas, of which there are many cultivated there, I was disappointed.

They are not more than two-thirds the size of those of New-York, inferior in juice and flavor, and most of them had a shrivelled appearance. Possibly the soil, (a friable limestone clay,) is in fault, for a finer climate to perfect their growth and ripening, I can hardly imagine. And such, I was told, is the usual character of the Isabella at and about Cincinnati.

En passant on *American* wines. I was familiarly chatting not long since, at a dinner table over a glass of wine, with a distinguished American—I could tell his name, but for the thought that I were boasting of a great man's acquaintance and friendship—and I named the Champagne Catawba of Cincinnati. "Don't tell me of *American* wines," said he—"we have a thousand good things in America—more than any where else—but we can't make *good* wines. The *volcanic* and other *friable* soils of western Europe, swept by the Atlantic winds, are the only good wine soils of the world, we hear of. From the northern coast of the Mediterranean we get some *tolerable* wines. In eastern Europe, and Asia, we know of none. In California and on our Pacific coast, we may, in time, produce good wines—possibly from the native grape found there; and when so, we'll talk of American wines. But for the present we must be content to grow cotton and wool, and our other valuable products for the wine countries of Europe, and let them grow wines for us in return." Perhaps it is so; for I could not gainsay authority so high on such a subject, as on many others, from which there is hardly an appeal.

Yet, the Champagnes and Hocks of Cincinnati, are largely drank at the best public tables there, and, I am told, preferred, at the same price, to the foreign Champagnes and Hocks. Time must yet test this matter. Yours truly, LEWIS F. ALLEN.

Black Rock, July, 1851.

REMARKS.—Mr. ALLEN'S account of the origin of the Isabella grape is a valuable contribution to our history of native fruits. There is, we think, no doubt whatever that the Isabella grapes in general cultivation over the country at large, all sprung from the original South Carolina vine whose history is correctly given by Gen. SWIFT. But there is no reason whatever for thinking that vine to have been a hybrid between the Fox grape and the foreign Burgundy. There are indeed, two very good reasons to the contrary. The first is, that any good botanist and vegetable physiologist need not be told that the Isabella is a pure unmixed native grape, like the Catawba—having unmistakable characteristics of growth and flavor, without a particle or trace of the habits of the grapes of Europe—a distinct species: the other is, that it differs so little from the native *Vitis labrusca*, or summer grape, as to leave no doubt of its being merely a good accidental seedling. What Mr. ALLEN says about the Vernet grape which he knew many years earlier, goes to show that other similar seedlings had accidentally sprung up earlier than that which is now known as the Isabella, and we have also once found a wild vine of this species on the banks of the Hudson, so nearly like the Isabella as not readily to be distinguished from it. The fact that a West India grape would not be *hardy* in this latitude, settles the conjecture touching that origin of the variety.

There is, unfortunately, no well authenticated proof that our native grape has ever been hybridised with the grapes of Europe. All our seedlings, so far proved, are chance seedlings—but we believe some of our pomologists are now busy with the experiment of crossing the species if possible—to effect a more speedy amelioration of the hardy native varieties. A cross between Black Hamburgh and Isabella, giving us the size and luscious flavor of the former, and the hardiness of the latter, would be worth untold thousands.

As to American wine, the question is no longer a mooted one—so far as Hock and sparkling wine is concerned—for the last and best vintages of the Ohio, have to our own

knowledge, been tasted this year by some of the best judges in our Atlantic cities—judges familiar with the same grade of wines on the Rhine—who rate the Ohio wines *very high*, both for flavor and *boquet*. The Ohio will soon become as famous for light wines, as the Rhine.

We have no reason, as yet, to disagree with Mr. WEBSTER (for we presume, from having heard this remark before, that our correspondent refers to that gentleman) respecting the necessity of a different soil and climate from ours, in this portion of the Union, for the production of good dry wines of the same grade as Madeiras and Sherries. But we understand from good authority, that California not only possesses these requisites, but has actually begun to produce excellent wines of this character. ED.

NOTES ON THE CULTURE OF AQUATICS AND NATIVE PLANTS.

BY DR. MUNSON, NEW-HAVEN, CT.

DEAR SIR—For the gratification of such of your readers as may have a taste for the cultivation of aquatic plants, and have not an appropriate situation for their culture, I would subjoin for the Horticulturist, (should you think it worth a place there,) a plan for growing them on a small scale; and give you a description of an aquarium in the garden of J. L. COMSTOCK, M. D., of Hartford, Ct.

It consists of a cheaply constructed box, made of thick pine boards, roughly put together, about sixteen feet long, fifteen inches wide, and twenty deep, open at the top only, having partitions and spaces proportioned to the room allotted to each plant, or parcel of plants, the divisions being from one to two feet apart. These spaces are filled nearly full of soil appropriate to the plants, and the water is supplied generally in sufficient abundance from a roof, by rains, through a trough leading to them, all excess running off.

In this the DOCTOR had quite an interesting group of wildings, which have luxuriated in their native vigor, apparently unconscious of any inferiority to some of their exotic neighbors.

Among them I noticed the white Water Lily, (*Nymphæa odorata.*) The Pitcher plant, (*Sarracenia purpurea.*) The Cardinal flower, (*Lobelia cardinalis,*) *Vaccinium oceycoccus*, *Acorus calamus*, *Typha latifolia*, *Chelone glabra*, *Caltha palustris*, &c., &c. In the vicinity, the DOCTOR had introduced, and had growing in perfection, many other interesting native flowering plants and trees. The following are some noticed by me:

Lygodium palmatum, *Habenaria grandiflora*, *Arctostaphylos uva ursi*, beautifully flourishing, *Aster cyaneus*, *Asarum canadense*, *Osmunda regalis*. Several species *Cornus*, *Viburnum*, *Salix*, and *Rhododendron*. Also *Aristolochia sipho*, from the Catskill mountains, a most luxuriant climber. *Leptanthus gramineus;* beside species of the *Yucca*, *Epilobium*, *Thalictrum*, *Sedum*, *Clethra*, *Liatris*, *Ludwigia*, *Staphylea*, *Euonymus*, *Equisitum*, *Viola*, &c., and *Solidago odora*, very flourishing. This latter species is worth cultivating for its fragrance. It is rare about New-Haven, and I know of but one locality of its growth here. It is difficult to detach a root from the parent stock, but I find on trial it grows well from slips placed in a hot-bed.

Now while on this subject it may be worth while to ask why are not more of our own native flowering plants and shrubs cultivated among us; they grow more vigorously than most foreign species, and there are many of them which few of our own people ever see,

which adorn the gardens of the wealthy in Europe. I would only allude to a few as an example of the large class of numerous native species worthy of attention.

How many beauties we have in the single class of orchidacea. In it are the *Calypso borealis*, *Gymnodenia flava*. The genus *Cypripedium*, Orchis, Arethusa, Pogonia, &c. &c. The families *Liliceæ* and *Rosaceæ*, &c., afford many more beautiful species. Of the trees, shrubs, &c. my time will not at present permit any extended remarks. The genus *Staphylea* affords three species, one native of our country, the *trifolia*, one of the West Indies, one of Europe. Where is there a prettier ornamental shrub than our *Staphylea trifolia*? Its beautiful striated stalks, symmetrical shape, and inflated capsules of seeds, vigorous growth, and being uninfested by any insect, all recommend it strongly for cultivation in pleasure grounds. Of evergreens we have one which is common, but its capabilities are scarcely at all known, or its cultivation would supersede many others which make far inferior appearance. I mean the *Abies canadensis*, commonly called *hemlock* and *Spruce Pine*. In its native localities it is a fine tree, but when trimmed in and shaped into such form as it is capable of, [allowed to grow and develop freely on all sides. Ed.] it is one of the most beautiful of evergreens, and of all others, seems to me most worth cultivating; plants of it under four or six years of age, set out in March or April, make a good hedge, and it lives under other trees better than most evergreens, but for trimming in as symmetrical garden trees, or for ornamental single trees, its excellence consists, and plants not over three years old are best; as they are kept trimmed they become very compact, resembling the Irish Yew; although handsomer, have been mistaken for it.

The seeds of this tree are generally eaten by birds or more of them might be found. Their cultivation from seed requires particular management; they germinate well, but great numbers die. Can you oblige us with the result of some of your own experience.

Very respectfully yours, A. L. Munson, M. D.

A RURAL SKETCH IN THE SANDWICH ISLANDS.

BY W. H. J., PENNSYLVANIA.

Honolulu—.We let go anchor abreast of the town about 3 P. M., and were immediately surrounded by canoes and bum-boats, swarming with natives, who rushing up to us, pulled out what looked like diploma cases made of bambo, and handed us innumerable certificates of being good *washermen*; some of the papers stated that the bearers were arrant rogues, and would steal, cheat, and lie, and the scamps thought we viewed them as most exemplary characters.

Pushing our way through the crowd, and nearly deafened by their clamor, we were paddled ashore in canoes with outriggers to prevent their capsizing, and strolled through the town. The streets were filled with natives, some of them almost in a state of nature, and others well dressed; the women walked in crowds covered with garments tied about the neck and hanging to the ground, of cotton or flaring silk, resembling walking rainbows.

Hundreds of them squatted along the sidewalks on their haunches, which is the common mode of resting, jabbering and staring at the "Ouries" or foreigners.

Honolulu is a pretty city and the tropical plants hanging over the walls, and trees sheltering the sidewalks, give it a cool and delicious appearance; it having rained this day, everything looked fresh and green, the air delightful, and sweet odours filling the atmosphere.

Nearly all the squares are surrounded by mud-walls or sun-dried brick, the houses all standing off the streets. Some of the houses belonging to foreigners are beautiful, being composed of coral taken by divers from its bed in the ocean. The squares enclosed by the mud-walls are filled with grass houses in which the natives live, and are large, cool and impervious to rain and more preferable to live in, in this climate, than those constructed of any other material.

An extinct crater called the "*Punch bowl*," rises back of the city, and on its sides are mounted cannon, which command the place; within the crater is a beautiful valley, where multitudes of goats are continually grazing. The city is bounded by the sea on one side and lofty mountains on the other, while a low narrow valley leads from it through the mountains, making a splendid and much frequented drive, with handsome trees planted on each side, for seven miles, where the valley terminates in an abrupt, perpendicular precipice, called the *Pare*, over which KAMEHAMEHA the First drove thousands of his enemies down several hundred feet, and not a single one escaped.

KAMEHAMEHA the Third, lives in a fine large house, surrounded by a beautiful garden, and near him lives his mother, a great fat old lady with a suite of half naked natives always at her heels, dozens falling into the procession as she walks the streets. His Hawaiian majesty is a good looking, stout fellow, and sports a genuine Broadway mustache.

After spending the day on shore, we hunted everywhere for a house to rent, unsuccessfully, and a *Kanacka* or native, overhearing our conversation, accosted us with, "me find good house, no too much money," so we followed our sable mercury until we obtained a good house, in the centre of a square filled with trees and flowers, opposite the king's palace; here we soon established ourselves, and lived in a style of "oriental magnificence" (excepting the magnificence!) with nothing to do but send our "Tamarre" or servant up one of our cocoanut trees, and revel in the nuts and milk.

I was here enabled to add many tropical plants to my already large herbarium. Our landlady, being a chieftess, wanted to give me her daughter (aged 13) in marriage, but not being ambitious to become allied to the aristocracy, I respectfully but firmly declined.

The old lady had many visitors of the softer, if not the fairer sex, and if perchance we would be indulging in the luxury of a genuine oak-leaf-Havanna, or meerschaum, the ladies would stop and gently remove said luxury from our mouths, and much to our unsophisticated consternation, would take a whiff or two, and pass it around, then politely return it, with a grunt of approbation or a "miti," (good). These eccentricities we soon grew accustomed to, and soon learned to *rub noses*, and smoke the pipe of peace, when we wished to conciliate.

Yours, &c., W. J. H.

TANNIC ACID FOR STRAWBERRIES.

BY H., ALBANY, N. Y.

MR. DOWNING—I do not understand how tannic acid can be a specific food for the strawberry. This has been asserted by Prof MAPES, at a meeting of the American Institute Farmers' Club, and your correspondent, Dr. HULL, and yourself, allude to it in the August number of the Horticulturist. I do not doubt the good effects of mulching strawberry plants with old tan-bark—the question is as to the hypothesis by which the result is attempted to be explained. Is it *known* that the strawberry feeds on tannic acid? or on what is the assertion founded? So far we are without any clew to the "why and where-

fore" of Prof. M.'s idea, unless the statement of his—put forth at the same meeting of the American Institute Farmers' Club,—that "toads eat strawberries," is to be taken as an illustration. Perhaps it is held that tannic acid is a specific food for toads, and that the toughness of their skins is owing to the *tanning* they have undergone from the effects of that acid, contained in the strawberries the animals had eaten!

But does any one suppose that tannic acid exists in the strawberry? If it did, it would be an anomaly, as the malic, tartaric, and citric, are the distinguishing acids of fruits; and though I cannot refer to any chemical examination of the strawberry, it is reasonable to suppose that its acid is one of these. Tannic acid may, to be sure, exist in the stem and root, and so it does in many other plants, to which it has never been thought of applying it as food. Plants have probably the power of elaborating their own acids.

Again, is it even known that old tan-bark contains any appreciable amount of tannic acid? It is well known that tanners use it as long as any tanning "liquor" can be made from it, and it is only thrown aside as "spent tan," when the tanning principle has been thoroughly extracted. The acid which then remains is probably the gallic. The beneficial effects of the bark as a mulch, are probably chiefly mechanical—preserving the moisture and friability of the soil. When mixed with the soil, however, it decomposes slowly, and may thus form a source of carbonic acid, on which it is *known* plants feed. But its value as *manure* is little or nothing till its natural acid is gone.

Can a single instance be cited of the beneficial application of tannic acid to plants? As a general thing, we know there is nothing more unwholesome for them than astringent acids. For example, peat or muck, from hemlock swamps, (and sometimes from other localities,) frequently contains a considerable amount of tannic acid, and when first dug, it is not only valueless as food for plants, but positively *injurious*—turning the leaves yellow, and checking the growth. The substance does not operate as manure, till rain, frost, and air have dissipated the acid.

It is true that strawberries have been known to grow well in reclaimed bogs; so have Indian corn, potatoes, beans, &c.; but is there any more evidence that tannic acid contributed to the growth of the former than the latter? Neither will grow well, till the surface of the soil has become changed and *sweetened* by decomposing agents. Cranberries, however, grow naturally, on bogs, without any preparation of the soil; but it has ever been pretended that tannic acid was a specific food for this plant, and its sour principle is known to be *citric* acid. H.

Albany, Aug. 1, 1851.

REMARKS.—It is we believe understood from recent chemical analysis that tannic acid forms a part of the strawberry *plant*, (not the fruit,) and it is upon this ground that it is considered especially beneficial to strawberry beds. From our own experience we cannot positively speak of beneficial effects from tan, considered as a specific manure. But as a *mulcher* we consider it by far the best we have ever tried for strawberry beds.

Prof. MAPES, however, in a conversation that we had with him a short time ago, assured us that he had watered his beds with diluted tannic acid with good results, and we hope he will give his own more complete experience for the benefit of our correspondent.

Tan-bark, *fresh* from the pit, does we think contain a considerable amount of tannic acid—as we have known it to injure very delicate plants, though robust ones do not mind it at all. ED.

THE BEST WAY OF PRESERVING FRUITS AND VEGETABLES.

BY H., DAYTON, O.

Your June number has a communication from "L., of South Carolina," asking information as to the proper method of preserving fruits and vegetables, with the flavor of those freshly gathered.

Though too late for any fruit but peaches, or vegetables, except, perhaps, tomatoes, this season, I will send you the method I have successfully practiced for five years, in keeping gooseberries, cherries, plums, peaches, peas, Lima beans, green corn, and tomatoes.

Tin cans, of about three quart capacity, are a convenient size for an ordinary family; the hole in the top should be about three inches diameter, and the cover pierced with as minute a hole as possible. Fill the can with the prepared fruit, solder the top on, place it over the fire in a pan or kettle, containing water enough to rise within an inch of the top of the can, and heat until the contents attain the temperature of boiling water, then close the hole in the cover, and the *thing is done*.

For peas, Lima beans, and corn, I have found it better to manage somewhat differently, and I think cans of about one-half the size above, sufficient, for the reason that these last should be eaten directly after being opened, while the others may be easily kept a day or more in cool weather, if not all needed at once. Peas and beans are put in water and brought to the boiling point, then filled into the cans hot, sealed up, and the cans immersed in boiling water, where they should remain half an hour at least. Corn is treated in the same way, using milk instead of water—I do not know whether the cans filled hot need any aperture for the escape of air—this depends upon the *rationale* of the whole process. Ure, in his Dictionary, suggests that its preservative property is effected by the small quantity of air which he assumes is retained in the can, becoming carbonized, but I think that where there is an aperture for the escape of the contained air, the steam from the water within will force out the whole of the air, so that the can, closed immediately and cooled, contains nothing but the fruit and its juice, or the vegetables, and the water or milk in which they were boiled. If the first explanation is correct, no aperture need be left, as there will be so little difference of temperature between the can full of heated vegetables, and the boiling point to which they are to be again raised, that there will be no danger of bursting the can; and it will avoid some trouble, for it sometimes exercises the patience and temper of an amateur tinker to close the can securely when hot, and the steam excited by the touch of the hot soldering iron—but if the latter be right, the hole in the crater must be made for the escape of all the air.

I am confirmed in the latter view from facts of my own experience. We sometimes put up fruit in glass or stone-ware jars, tied over with a double bladder. These are tied securely before they are heated, and of course contain air where not occupied with fruit—but we invariably find about half an inch in depth, from the top of the fruit, spoiled. This, I think, must be the effect of the small portion of air contained—but my facts, i. e. experiences, are probably more interesting than my philosophy, and they are impregnable.

In our community, *preserved* [I mean preserved in sugar or syrup] peaches, plums,—indeed the whole catalogue of these monsters of indigestion, are becoming "rara aves" before the economy and luxury of this *better* way.

I infer this will not meet your correspondent's views, who evidently expected to preserve his strawberries with the moisture of the morning dew gleaming upon their blushing sides, and his peaches with their bloom untarnished, but it is the next best thing, and

besides, the best now at our command, I mean we of the great public, for I believe there are some dealers who possess the art of preserving strawberries, and of course less delicate fruit, with the fresh flavor and beauty—and if we think it worthy commendation and premiums to originate a valuable kind in any variety of fruit or vegetables, would it not be worth while to offer a premium of corresponding value for the method of preserving the fruit of a week or a month, for enjoyment during the whole year, in its original deliciousness. If the secret could not be purchased at a reasonable rate of its present possessors, would not a premium of one or five hundred dollars encourage a competent and practical chemist (a spice of horticultural furor would be no disqualification for the task) to attempt its discovery. The "chicken in every subject's pot" would fade forever before *strawberries* at *Christmas*, without hot-bed or furnace, or the "*price* of a Knight's ransom." Yours, &c. H.

Dayton, O.

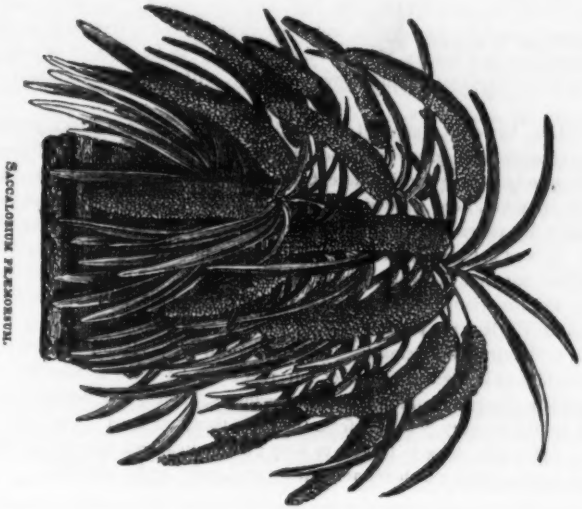
FLORICULTURAL PERFECTION.

THERE are few persons, even among our most experienced horticulturists, on this side of the Atlantic, who know to what perfection floriculture is carried in some parts of Europe, where certain plants are made the object of especial attention and admiration. Every one has heard of the Tulip and Hyacinth cultures of Holland, and the Rose culture of France, but no where are the entire perfections of floriculture carried to so high a pitch, at the present moment, as in Great Britain. In the first place, we must remember that gardening is the passion of many of the nobles and persons of the largest wealth in that kingdom;* in the second place that the gardeners are a highly intelligent reading class; in the third place that labor is comparatively cheap, and lastly that the prizes given at the great horticultural fetes have bro't all the best horticultural talent into a wide field of competition.

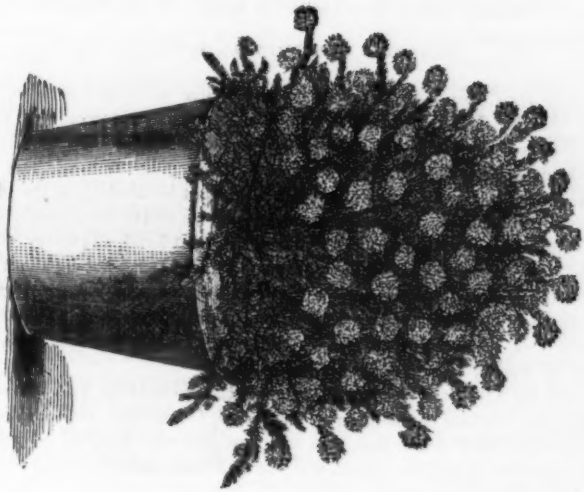
GARDENIA STANLEYANA.

The result of these various circumstances has been to make the two great horticultural fetes of England—those of the Horticultural Society and the Royal Botanic Society—the most wonderful sights, to a lover of horticultural skill, that the

* Mrs. LAWRENCE, the wife of an eminent physician near London, who is one of the most successful competitors at all the great shows, is said to spend $30,000 a year on her gardens.



SACCOLABIUM FLEXUOSUM.



ERICA ELEGANS.

world has ever known. Although Britain is by no means a propitious climate, for fruit, (we believe VOLTAIRE said the only ripe fruit England yielded was a baked apple,) the displays of grapes, peaches, pine-apples, and other choice pomonal treasures, at these shows, are in point of size and beauty, if not in flavor, hardly to be equaled by any part of the world where these separate fruits grow naturally, with all the advantages of a genial climate.

Our attention, however, was most attracted by the specimens of exotic plants grown by the leading florists and gardeners, and shown at these exhibitions. Species, that we usually know only as lean and indifferent in habit—because all attention to high development is denied them, here showed the same superiority to the specimens as commonly grown, that a fine thorough-bred animal does over a lean, starved creature of the country stock. It was not merely that the flowers were finer, or the plants healthier, or the foliage fresher, but that the whole plant had been developed with a perfection of growth, symmetry, and luxuriance, that we had never seen elsewhere, and that, in fact, has never been seen until the last ten years.

We give, to illustrate our remarks, three very accurate portraits of rare plants shown at these exhibitions last year. Most of our readers, who have a taste for exotics, will understand at a glance how different these specimens, loaded with flowers at every point, fresh with health in every pore, are from the same things as most of us know them in our collections. It is one thing to be able to keep plants alive, and another to bring them to the highest development which art and nature conjointly make possible.

THE CURCULIO—VERSUS LIME AND SULPHUR.

BY THOMAS W. LUDLOW, JR., YONKERS, N. Y.

A. J. DOWNING, Esq.—As as it appears by a writer in the last number of the Horticulturist, that Mr. LONGWORTH, of Cincinnati, has not as yet succeeded in preventing the attacks of the curculio, and that his theory is wrong; that the instinct of the insect teaches it not to deposit its eggs in the fruit of trees paved underneath, or those leaning over water, or in any such situations, where its eggs cannot be hatched, or the grub protected during its transformation, I must beg him, as well as all the unsuccessful cultivators of smooth skin fruit, not to despair, for there is a remedy at hand, and a very simple one, too.

To wit—(for facts are all that are wanted in this matter,) having about twenty plum trees, which have blossomed freely for the last six years, but have never ripened any fruit, I was induced, by reading a notice in the Horticulturist last year, of the efficacy of lime, to try two trees, by syringing them with white-wash made of unslaked lime, with a *handful or two of flour of sulphur* mixed through it.

Just after the fall of the blossom, I observed that much of the fruit was stung. Then, in order to give the lime and sulphur a fair chance, I shook the trees, and gathered about thirty curculios, after which each tree was syringed with a pailful of white-wash and the above quantity of sulphur, which was repeated twice more, allowing three days to intervene between each application.

I am now happy to state, that one of the trees is so heavily laden with plums, that I will be obliged to prop the limbs. It is a common variety, but however, I invite all those who are inclined, to come and see it, as it is a rare thing in these parts, where even com-

mon plums are almost unknown. The trees stand in a soil the best adapted for the nursery off all kinds of insects, being warm, dry, and sandy.

I have observed that the syringing not only checked the ravages of the curculio themselves, but destroyed the vitality of their eggs deposited, and thus insures the fruit, even though it had the scar of the puncture already upon it. Truly yours,

THOS. W. LUDLOW, JR.

Yonkers, N. Y., August 12, 1851.

We are glad to get so straight-forward an account of a successful experiment, from a correspondent who is a pains-taking horticulturist, and whose accuracy may be relied on. It will be remembered that some of the lime-wash experiments have failed—but so far as we know, Mr. LUDLOW'S addition of sulphur is new, and may prove more effectual. ED.

ON EXPRESSION IN ARCHITECTURE.

BY S. H.—FROM THE LONDON BUILDER.

A GREAT part of the difficulty in reference to decorative expression arises from our contracting too much the field of our resources, from a neglect of many sources from which the fibres of architecture should be nourished. Egyptians, Indians, Greeks, Romans, Venetians, and our own mediæval architects, drew their inspiration from the highest fountains then open to them; and we see the poet and the orator ransack all nature, existing art, and science, for similies and metaphors wherewith to vivify their works. Now architecture, to be a living art, and reflect to posterity the divine of humanity, must do likewise: it must move with the general march of mind, and grow with the increase of knowledge: it must digest every improvement in science, and draw its vitality and power from every accessible source.

The entire language of architecture is really a copious one: all nature, animate and inanimate, and all extant art, offer themselves as models to the architect. The botanist, the geologist, the naturalist, the chemist, the archæologist,—all explorers and expounders of nature, of history, and of art, are, though they may not be aware of it, benefactors to architecture; but their gifts have been but partially applied to the enrichment of the poetry or the strengthening of the expressive faculties of the art.

Modern sculpture, as applied to architecture as well as sculpture generally, has, I am well aware, a different province to that of the ancients, which was to express the natural idea of their deities as promulgated by the poets, and which was conceived after the analogy of humanity. The Greek sculptures are hieroglyphics of Pagan theology: the gods of the Greeks partook of the character of men, and coming within the shade of human passion, and actuated by human motives, they admitted of personal representation. As we conceive of the Deity in a totally different manner, as filling immensity and "inhabiting eternity," no graven image, however warm with the fire of genius, will answer to our ideas. We must, therefore, be careful how we draw from heathen mythology for the embellishment and illustration of Christian churches.

Objects employed in Pagan rites are unfit emblems for such structures; but Christianity has its own subjects and sacred objects of illustration, which may be applied to the classic architecture as well as to the Gothic. In the sculpture, painting, stained glass, &c. of the middle ages, the patriarchs, apostles, and saints were distinguished by their peculiar attributes, or by some particular circumstance allusive to sacred history, just as

were the gods and heroes of antiquity. More rational and artistic compositions than many of these could doubtless be formed; but they might be made the basis of a system worthy of the present advanced state of art and religion. Surely Scripture yields a sufficient field for this, and sculpture could embody the sacred memories and associations of our religion,—the sublime personages of Bible history, as well as the myths and allegories of the ancients. For secular purposes, the case is different; and though faith has ceased to be exercised in the Thunderer of Olympus, and the empyreal conclave of subordinate divinities, yet a great portion of Greek mythology and allegory will apply to our general purposes; and, as far as they are so applicable, they are unimprovable. Their is something so exquisite in the conceptions of these ideal and figurative beings, which so beautifully personify the different qualities, physical or moral, that they represent,—their roots are so deep in nature,—that they must ever have a potent spell upon our feelings and imagination. For emblematic illustration, what could be superior to the attributes and emblems of the mythology? The helmet and lance were the symbols of war, and may be such while war continues. The lyre and laurel branch are still appropriate symbols of harmony and fame. The myrtle-branch and the dove were to characterise affection, and may still do so, as the palm branch and wreath may announce victory, and the olive, peace. Though symbols of a banished creed, do they not belong to humanity?· No more natural and beautiful emblem of justice than the equal balance could be conceived: the hoodwink of Impartiality, the veil of Modesty, the bridle of Temperance, are unrivalled in their significant beauty. Festoons, wreaths, garlands, to whatsoever they owe their origin, have been universally received among cultivated nations as representative of certain ideas, and may still be so employed while art shall need them. Symbolism and allegory are a source that has been inadequately drawn upon in modern architecture: yet it is surely an artistic one. The Greek architecture spoke by it, and emblems were invented when ancient art had reached a high point of perfection. The trope and metaphor of poetry and Scripture are used on the same principle,—to illustrate and strengthen the intended idea. What striking morals are conveyed by allegorical persons and things in poetry! The destination of some buildings cannot be distinguished from that of others by an appeal to analogy alone, and therefore a further language is required; and here is one of almost infinite scope, that supplies genius with a boundless field of invention,—a rich and beautiful language, and, withal, a natural one, for we are instinctively prone to allegorise: personification is the natural language of feeling and imagination.

But whatever mode of illustration we adopt, we must not neglect our own national resources. In drawing from British literature and history, and embodying in stone the creations of our poetry, or the great historical personages of our country, we follow the highest ancient examples, and such subjects generally will be more interesting to English hearts than the brightest imaginings of Homer and Hesiod. Thus enriched, we should find no difficulty in characterizing our respective works. The destinations of modern edifices are not too numerous in their variety to be distinguished, when all our resources are drawn upon, and all our unwrought elements organized. The various arts and sciences,—the different virtues, have their respective natural emblems; the Romans deified all the virtues, and gave them their appropriate attributes, or distinguished them by their attire, and such creations we could not improve. The instruments used in the various arts and sciences have been employed on buildings as indications of their devotion to these arts, and they may be still employed with the greatest propriety. We do well to immortalise in stone the fading forms of nature; but artificial forms are often called for, and may not only be useful in expression, but conducive to beauty: many musical and other

art instruments are graceful in form, and, while so, they are, though the work of man, also reflections of the work of God.

The representing literally the use of a building by means of sculpture or painting, with a view to rendering the work completely phonetic, good taste, I think, would not sanction: the phonetic quality is not called for or desirable in architecture,—nor are painting and sculpture higher arts than architecture, from being phonetic: if they were, the lowest branch of literature might claim precedence of it. The subject of Paul preaching at Athens, on the facade, or in the pediment of a building, would speak plainly enough of Christian worship; but this mode of expression would be more prosaic than poetical, and would remind us too much of the significant hat or boot of colossal dimensions, that project into some of our trading streets.

I observed above that one style is better fitted for expressing a given character than another. Now, this peculiar and exclusive fitness for one purpose, eminently characterizes the Gothic or pointed style of architecture, which deserves separate notice here. The Gothic system is not what many of the advocates of the classic styles have asserted it to be,—an incoherent style, unnatural and false to principle, devoid of all harmony and proportions. Nor is it full of inconsistencies and caprices, as contended by others. Inconsistencies and caprices appear only at first sight, and to superficial or prejudiced observers. The great monuments of this style evince the most striking intention of purpose, and a power of expressive grandeur and sublimity in harmony with that purpose, which no other system could have secured. But Gothic architecture, notwithstanding, will never become the universal style. It is only adapted to the expression of qualities analogous to sacred uses, and will be the more sacred in its associations from being exclusively devoted to such uses. The cathedrals and churches erected during the Gothic period were exactly adapted to the Roman Catholic ritual—the form of devotion then in use, to processions and every other ceremony connected with the religious service of the day. Music, for example, was an important part of the service, and the cathedrals were built so as to give the finest effect to music: they were covered interiorly with sculptural and pictorial decoration in harmony with the spirit, and symbolizing the leading points of belief; and like the maze of material beauty in nature speaking also of the eternal splendor and sublimity. There was a completeness of adaptation, a conspiracy for the expression of one idea, perhaps never before or since exhibited. "Then," says Menzel, in his history of Germany, "the pile resounded and spoke, like God from the clouds, from its lofty tower, or alternately sorrowed and rejoiced, like man, in the deep swelling organ: the arts of the founder and musician were each devoted to the service of the Church." The Tudor style is suited to all buildings of a domestic character, but ecclesiastical Gothic, applied to civil or domestic purposes, is out of its natural element, and must present to the eye of taste inconsistency of the grossest kind. It can have no harmony or sympathy with ideas and enterprizes of earth, which it seems to spurn. It speaks not home to men's "every day business and bosoms." It is all-aspiring, like the flame, heavenward; and finds a solution of its mystery only in the faith that points to worlds

"Far above the clouds and beyond the tomb."

In respect of mere sensuous beauty, it (Gothic architecture) cannot compare with the Greek, which possesses the most exquisite adaptation of form and style to every variety of purpose; but I have spoken of it as regards its vitality and power and truthfulness to its original and peculiar purpose: as regards its application to ecclesiastical uses and power of analogous and symbolical expression, Gothic architecture is a perfect system; it fills a high and holy place in art, to which it is wonderfully, we might almost say divinely,

adapted; and I would have it respected like a thing set apart, and which nothing secular should profane. It must, however, be observed that for general purposes of expression, an architect need not fetter his genius to the particular mode or style of any age or country past or present. Indeed so fettered he cannot give suitable expression: his self-imposed manacles will be among the causes of his failure. On observance of distinct style beauty is not dependant, and an expressive character may be given without it: nay, architecture itself may be conceived of as distinct from style: style is the servant—an useful one—of architecture, but not its master. A building, I apprehend, might be so designed and erected as to exhibit no trace of any style known in the world, and yet be good architecture,—a real work of art. The circumstances of climate and situation under which an edifice is to be built, and its destined use, may be so peculiar as to dictate a form of structure and style of decoration differing from any thing existing; yet an unbiassed attention to such dictation might result in an artistic and meritorious production. It belongs to the very idea of a fine art as distinguished from the mechanical arts, to yield the utmost scope to the inventive faculties throughout; and the remark applies to architecture as far as consistent with the prior demands of utility,—the first law. The critic should therefore be taught to judge of architecture independently of style, and in reference only to philosophical, *i.e.*, abstract architectural principle. We should not consider whether two or more features we would wish to introduce into a design belong to one style, and were employed together in ancient examples; but whether they would naturally harmonize. With all due reverence for Italian architecture, I hesitate not to say, that as a style or system of architectural design, we have nothing to do with it. With its members, its mouldings, as with words, we have to do. We have to resolve it into its original elements, taking due advantage of what Italy or modern design has contributed to the general stock as additional words enriching and swelling the antique languages, for the expression of English ideas. Using it otherwise, might remind one of a tradesman or shopkeeper going to his brother trader instead of the merchant for his goods. We might as well take the French architecture, or the Spanish modification of the classic: the error, different indeed in degree, would be the same in kind. Why use a translation when we can read the original? Or go to a derived system, when we can have access to the parent source?

But whatever the style, or whether we have style or not, the present purposes of our buildings, be those purposes what they may, must govern the form or plan, which should be precisely what the purpose requires,—adapted to situations and circumstances without reference to the associations of past art, or the requirements of deceased institutions. The signs of language or elements we use, must be employed not in repeating ancient thoughts, and feelings, and purposes, but in clothing the ideas of to-day with a material form. The purpose or destination is to a building what the subject or fable is to a poem, and like the subject in the poem, this purpose should thrill, as it were, through every part, and beam from every feature. The idea of its design must be conceived in accordance with our habits and manner of life, customs, worship, &c., according as it is public or private, and that idea of its use or destination must pass like a spirit into the building, and pervade and animate it. Art owns nature and reason, not precedent, for her law-giver; "it is not metre, but a metre-making argument, that makes the poem." Nor is it columns and entablatures, nor arcades and buttresses, that constitute architecture. "For works which are the result of the mere connexion of even beautiful forms," observes a German writer on Art, "would themselves be without all beauty, as that which gives beauty to the whole cannot be form. It is beyond form—it is the essential, the universal, the aspect, and expression of the indwelling spirit of nature." S. H.

ON RENOVATING OLD PEAR TREES.

BY A BOSTON SUBSCRIBER.

Dear Sir—Many of your readers living in the sea-board states, have in their gardens old pear trees of fine sorts, principally St. Michels, Butter pears, St. Germains, or other well known varieties, that have fallen into disrepute. The reason of this, as most of the writers of the day affirm, is, either that the varieties are worn out, or else the soil is exhausted of the food that once enabled these trees to bear such fine crops of beautiful pears, as they were once in the habit of doing, annually.

I suspect there is some truth in both these conjectures. In other words, I do not believe the fine old pears, such as the St. Michel and St. Germain, can by any process be restored to precisely the same state of health and productiveness that belonged to them forty years ago, in this part of the country; but at the same time, I think it can be easily proved that they can be made productive, and that a worn out soil is practically the cause of much of the degeneracy which we see here among the fine old pears.

Your readers will no doubt remember some brief directions which you gave in one of the early volumes of the Horticulturist, for renovating old pear trees. As several of my acquaintances in this county have tried the experiment, and as I have myself, dabbled a little in the matter, I hope you will allow me to make a few comments, with a view to contributing something to the stock of useful knowledge on this subject.

The principle assumed in the directions given to renovate old pear trees, is, that the soil of our worn out fields and gardens, has become deficient from long cultivation, in the mineral substances needful for the perfect growth of the fruit. These substances are especially lime, potash and phosphates. In order to supply these deficiencies, it was recommended to apply liberally, lime, ashes and bone dust. This was coupled with directions to add fresh soil, rejecting the old soil, and a considerable quantity of animal manure.

As many persons like to get at a given object with as little trouble as possible, they have doubtless failed in recovering old pear trees, because they have trusted solely to a liberal *top-dressing* of the said ashes, lime and bone dust. Such top-dressing will, of course, benefit a young and healthy tree—but they are by no means sufficient to renovate one that has stood in the same place for twenty or thirty years—and exhausted the soil as far as the roots extend, of not only the necessary mineral, but also animal or vegetable matters. I will recount the treatment of three trees that have particularly come under my own inspection, to illustrate this position, as well as to show the real value of the mineral manures.

These three pear trees were all of the St. Michel or Doyenne variety. They stood on the north side of an old kitchen garden—were all about twenty-five years old—had borne many good crops of fruit—but had cracked and failed for ten years past.

To begin, all these trees had trenches dug round them, and the roots were partially laid bare of the old soil.

The first one, (which I shall call No. 1,) had good soil put back, mixed with half a bushel air-slaked lime, two bushels ashes, leached, and half a peck of bone dust.

No. 2 had no lime or ashes, but about three cart loads of strong stable manure incorporated with the fresh soil that was filled in the trench and about the roots.

No. 3 had the same quantity of lime, ashes and bone dust, as No. 1, and the same quantity of stable manure as No. 2.

This is now three years ago. All the trees have greatly improved. No. 2, which had only manure, has made a good growth, but the fruit is still imperfect. No. 1, which had only the mineral manures, bears much better fruit than it formerly did, but the tree is not vigorous. No. 3, which had a plentiful supply of both mineral and animal manure, is not only very much the most luxuriant tree, but is loaded with a crop of St. Michels that reminds me of "old times."

Does not this experiment prove that to renovate an old pear tree, it is not sufficient to give it lime, potash, and the like? I think so. But there are other points which are worth a moment's attention.

The first is, that an old tree, with stunted short branches, which have grown perhaps only two or three inches per annum, for five years past, is not in a condition to be roused into healthy growth, even by both kinds of manures. For such a tree, it is necessary to use the *knife*, in order to force the tree to *re-act* or rouse itself a little—to make new wood—to put out fresher and larger leaves—in short, get up a new set of sap-vessels at the extremities, which are not so choked up and sluggish in action as the old stunted ones.

The right way to do this is to *shorten-back* the ends of the limbs—say from six inches to a foot, all over the tree. The more the tree is stunted—the more it should be cut back. But never "trim out" the large branches of an old pear tree severely—as this often has a tendency to cause the fire blight. The shortening-back may be done in early autumn or spring. I prefer March. The best time for the "renovating" is in the autumn.

The second point, is to keep the tree well *mulched* over the surface of the ground that covers the roots. The best things for this purpose I believe to be salt-hay—or tan bark. It should be spread as far as the roots extend—or better still, half as far again. The roots of trees actually *luxuriate* in the cool and moist soil that is always to be found under the mulching—even in this hot and dry season, when otherwise, the top soil would be as parched as powder.

Although I have given you but three examples of pear trees *renovated*, I have seen several others which go to illustrate with greater or less force the facts I have stated. The older and more stubborn the subject, the more it becomes necessary to give it a very liberal supply of both animal and mineral manures. But once applied in the manner I have directed, it will not probably be requisite again for several years, or perhaps an annual top-dressing of the same substances would be sufficient for a long time afterwards.

I am sir, yours, A Boston Subscriber.

Boston, Aug. 1851.

We thank our Boston Subscriber for his practical communication, which we cordially approve. Old pear trees that have become barren, need an abundant supply of animal manure as well as mineral, to rouse them into a state of renewed growth and fruitfulness. We were present lately at a discussion which took place respecting the application of substances to renovate old pear trees—in which one of the experimentors declared his utter failure and want of faith in any such results. Another gave an account of a fine old tree most completely renovated by a plentiful drenching of the soil about its roots with "*bullock's blood*," one of the most powerful of manures, containing both organic and inorganic food for plants. Ed.

STUDY OF PARK TREES.

[SEE FRONTISPIECE.]

THERE is as much difference between a wild *forest* tree and a *park* tree, as between a wild horse and the finest trained Arabian courser. Full, as our forests are, of native trees in the richest variety to be found on the globe, but few Americans are familiar with the beauty of finely developed trees. Even in our ornamental grounds, it is too much the custom to plant trees in masses, belts, and thickets—by which the same effects are produced as we constantly see in ordinary woods—that is, there is picturesque intricacy, depth of shadow, and seclusion, growing out of masses of verdure—but no beauty of development in each individual tree—and none of that fine perfection of character which is seen when a noble forest tree stands alone in soil well suited to it, and has "nothing else to do but grow" into the finest possible shape that nature meant it to take.

One sees such trees, to be sure, occasionally, all over the country. Witness the elms of the Connecticut valley, the maples of the Housatonic, the tulip trees of Pennsylvania, and the oaks of Western New-York. But there are two places where this kind of park-like development of trees, is most perfect and complete.

The first is, in the English Parks—those broad grassy surfaces, studded with scattering trees and groups of trees—hundred of years old—many of them allowed to grow into the most beautiful forms that nature has impressed into their organization, and spread out into the richest drooping umbrageous heads of foliage that so favorable a climate for their growth can beget.

The other position is in the *natural parks* of America—the oak openings of the West—where, over a gently rolling surface of thousands of acres, you see grouped, precisely as in an English Park, but sometimes on a still grander scale, the noblest trees—now singly, and now three or four, or half a dozen together,—trees, each one of which would have been chosen by CLAUDE as a study for the foreground of his wonderful landscapes—which are the master-pieces of slyvan beauty. Nearer home, such a growth may be seen in the meadow park at Geneseo,—the WADSWORTH estate, previously described by us—where are as fine oaks, by hundreds, as are to be found in any park in England.

It is remarkable, that these grand parks of America, and the best specimens of English taste in Landscape Gardening, should be such close counterparts of one another. And though a man may have room to plant only half a dozen trees, yet he should study such examples as a sculptor would study the APOLLO or the VENUS—to make himself familiar with that high-water level of the beautiful in form, where both art and nature meet and become identical.

Reuiew.

THE AMERICAN POMOLOGIST: containg finely colored drawings, accompanied by letter press descriptions of Fruits of American origin. Edited by Dr. W. D. BRINCKLE. Published by A. Hoffy, Philadelphia. ($2 a number, quarterly—$8 a vol.)

Those who remember Mr. HOFFY'S colored serial of Fruits, of which only a few numbers were issued in Philadelphia, some five or six years ago, will recognize the prototype of this new work which has just issued from his press in Philadelphia. It is a quarto

number with plates, showing thh specimens of fruit with their wood and foliage attached, lithographed and colored by Mr. HOFFY, in very good style.

The new features which entitle it to favorable consideration, are two. The first, that it is devoted wholly to Fruits of *American* origin, which will commend it to all those who, like ourselves, have *faith* in the products of our own soil as best adapted to this climate; and second, that it is edited by Dr. BRINCKLE, one of the most zealous and accomplished of the amateur pomologists of the country.*

The first number contains the Brandywine, the Moyamensing, the Petre and the Pennsylvania Pears: the Republican Pippin, the Eliza Peach, the Burlington Apricot, Wendell's mottled Bigarreau Cherry, and the Wilder and Cushing Raspberries. A plate is given of each variety, and the letter press, though very brief, is perhaps sufficient for a work which presents a full portrait to the eye of the reader.

We beg Dr. BRINCKLE in this work, which promises to become one of value, to adopt the classification of fruits, as respects *quality*, which has been established by the Pomological Congress, viz: *good, very good, best.* It is impossible for the general reader, from his description of the varieties figured, (and the fault is common to most books or prints) to tell what is the real rank of the variety. The Pennsylvania pear for instance—a sort which we (and most other northern pomologists) have fruited and rejected, is set down with the single remark as to its flavor, that it is "highly perfumed." This is quite true—and yet it is no less true that, compared with the standard, it will *not* rank as a "good" pear.

The work is one which will commend itself to pomologists and fruit growers, and its appearance is the best proof of the steady progress of fruit culture in the United States.

* We are only sorry to observe that the Doctor says, in his preface, he is in no way connected with the profits of the undertaking—it is wholly a labor of love with him. We only regret this because we have generally found that what is not worth paying well for, is not worth doing so well—especially if it has to be done month after month, and year after year. We trust our friend will prove the rule has exceptions.

Foreign and Miscellaneous Notices.

PHILOSOPHY OF MANURES.—It is an excellent custom in certain foreign countries, and one which leads to very valuable results, to send from time to time scientific men to travel in the various neighboring kingdoms; they are sent with a specific object, they carefully investigate the matter to which their attention is directed, and on their return, they make a report to the government who sent them, embodying the facts which they have collected in their travels, and the conclusions at which they have arrived; these reports, which are generally drawn up by men eminently well qualified for the task, often present better and more impartial views of the particular manufactures of the kingdoms so visited, than could possibly be prepared by any one residing in them. There is a good illustration of the truth of this, in the skilful reports lately drawn up by M. PAYEN, by desire of the Minister of Agriculture and Commerce of France, on drainage, the use of peat, and the employment of artificial manures in England. These reports, written by an excellent observer, one who is intimately acquainted with all the various departments of scientific agriculture, and the economy of vegetation in general, are of the highest interest and importance.

If, however, a stranger visiting England for such a specific purpose, comes with the advantage of an unprejudiced and unbiased judgment, he has at the same time, the disadvantage that he does not always know in how far he may safely rely on the statements which are made to him, and he therefore runs considerable risk of being misled by false or erroneous information. The conclusion which M. PAYEN appears to have arrived at, from a very careful study of the present state of the manufacture of artificial manure in England, and of the results of

numerous experiments on the practical application of those manures, might probably be expressed as follows. A dozen years ago it was stated by LIEBIG and his followers that the great object of all artificial manures was to supply certain inorganic matters to growing plants. It was asserted that soils became exhausted from the abstraction of potash, phosphoric acid, and soluble silica, and it was therefore said that manures were chiefly valuable in proportion to the quantity of those substances which they contained. The experience of the last few years has, however, shown that this is not really the case, for the most careful and satisfactory experiments have proved, that soils are very seldom wanting in the inorganic elements of plants, such as phosphoric acid and alkalies; but that they are often deficient in nitrogen, in a state capable of being assimilated by plants. In other words, that ammonia and nitric acid are far more important components of manure than phosphoric acid or alkalies.

That LIEBIG did, at one time, attribute very great importance to the earthy and alkaline parts of manure, no one will deny; and, indeed, it is evidently proved, by the fact that he even became the originator of a patent mineral manure, which, as PAYEN remarks, has for the most part been found of comparatively little real value. If, however, it is acknowledged on the one hand, that the value of these inorganic manures has been over-rated, it must, however, at the same time be admitted that there are circumstances under which they produce very remarkable effects; and that even though it is proved that they are not the only things necessary to the growth of plants, or the only things which the cultivator has to add to the soil, it does not, therefore, follow that they are of no value at all; and we ought to take care that in acknowledging our error, we do not fall into the opposite extreme.

It has been all along known, that the very best manures were those which contained a mixture of organic and inorganic matters; substances such as common farm-yard manure, consisting of decomposed and decomposing animal and vegetable materials, intimately mixed together. The error which has been committed consisted in the attempt to compare perfectly different and opposite things; and to decide which of the two was the most important. The alkalies and phosphoric acid are, no doubt, quite essential to the growth and well-being of plants; but so also are ammonia, nitric acid, and the various other sources of nitrogen. To attempt to compare the two kinds of food, is pretty much as though we were to try and compare together meat and bread, as articles of animal food; both are valuable, and the two taken together are more valuable than either taken alone. So it is with plants; it is of no use attempting to determine whether ammonia or alkaline phosphates are the most important, as constituents of manure; they serve very different objects in the nutrition of plants, and when the one is required, it is certainly idle to attempt to supply its place by giving more of the other.

There are a number of curious experiments which have at times been quoted, as proving that the organic part of common yard manure is of no value; and that its virtue consists entirely in the inorganic salts which it contains. Thus, for example, it has been stated, that on manuring two equal pieces of ground, the one with a certain weight of good farm-yard manure, and the other with the ashes of an equal quantity of the same manure, no difference could be subsequently observed between the crops raised on the two fields. The truth of this, again, has been called in question by other experiments, the results of which were just the reverse; and those who attempted to draw general conclusions from the two experiments, were at last fairly puzzled how to reconcile two apparently diametrically opposite statements. The real cause of the difficulty, however, was simple enough; it arose merely from the attempt to compare together dissimilar things, which, from their very nature, could not fairly be contrasted with one another. If we admit that which is now pretty well generally acknowledged, namely, that all plants, in addition to certain other substances, require both ammonia and also alkaline phosphates, it is very easy to perceive, not only that a manure containing both those substances must be generally valuable, and therefore more certain in its effects than a manure which contains only one or the other; but also that such a manure would act in a very different manner on different soils, and applied to different plants. For example, good farm-yard manure, applied to a soil rich in earthy phosphates, and abounding in bone earth, will, nevertheless, be found to do good and cause the plants cultivated in it to grow with increased vigor and luxuriance; not because of the phosphoric acid which it contains, but chiefly from the presence of a certain quantity of ammonia, nitric acid, and matters capable of yielding those substances by their putrefaction. Nevertheless, the same manure

applied to a soil containing no phosphoric acid, but artificially supplied with salts of ammonia, will also be found to act beneficially; in this case it is not the ammonia, but the phosphoric acid of the manure, which is of importance. Or, if in place of applying a mixed manure, such as we have imagined, to these two soils, we were to take simple chemical manures—say phosphate of lime and sulphate of ammonia, we should probably find, that upon the one soil the phosphoric salt was the best manure, whilst upon the other the salt of ammonia would produce the best effect. It is plain, then, that the value of these different elements of manure must depend on the wants of the plant, and on the capabilities of the soil.

The conclusion, therefore, to which M. PAYEN arrives, namely, that the mineral manures, consisting chiefly of phosphate of lime, and containing little or no organic matter, are of comparatively trifling value, and that they act so slowly as to be of small profit to cultivators, is perhaps rather too sweeping a condemnation. Undoubtedly they will not supply the place of ammonia, but at the same time they are valuable manures, and on certain soils the cost of their use is amply repaid, especially when they are employed in conjunction with animal or ammoniacal manures. In the composition of artificial manures, M. PAYEN fully admits the value of sulphuric acid as a solvent of phosphate of lime; and he insists strongly on the great practical value of charcoal when associated with rich animal manures.

In concluding his report, M. PAYEN well observes, that there is one thing wanting which would be a very great aid to the cultivator, and that is, that all artificial manures should be designated by plain and simple names, expressing their real nature, and that their exact chemical composition should be honestly stated, as their purchasers would be no longer deceived by mysterious names, or misled by vexatious uncertainty as to the real value of the manures they buy. On this point there can be no doubt as to the evil, though the remedy may not be quite so clear. Perhaps the best advice which can be given is this—buy only of respectable dealers, and do not be deceived by *cheap* manures; if you are tempted by what is termed a bargain, you are pretty sure to suffer in the end; good manure is well worth its fair market value; the trash which dishonest dealers sell you is often not worth having as a gift.—*Gard. Chronicle.*

WINTER GARDEN IN THE CRYSTAL PALACE.—Shall we keep the Crystal Palace? says "DENARIUS." What is to become of the Crystal Palace? asks Mr. PAXTON; and the same questions are daily put by thousands of voices, less powerful but not less earnest. As yet no answer has been given, and probably no answer will be given till the public has more generally expressed its own opinion. Let us then endeavor to point out to those who do us the honor to read our columns in what way this question strikes us.

"DENARIUS" believes that the building may be applied to various scientific uses, that it may become a great gallery of sculpture, a winter garden filled with fountains, and groves of Orange trees, a gymnasium where science and art may unite in friendly contest, where schools and lectures would naturally arise, and where periodical exhibitions would be held of silk-weaving or cotton-printing, and the manufactures which give their names to the great City Corporations, the Goldsmiths', the Ironmongers', the Mercers', the Dyers', &c. "If the place," he says, "were recognized as a receptacle for plants and shrubs, it might be expected that in a very short time it would be well furnished with public donations. Proceeding with the development of this idea more in detail, it may be pointed out that the nave and the aisles 48 feet wide, would give a space of 10 acres independently of the galleries, which would give in addition, walks exceeding a mile. The ground floor might be used for plantations and sculpture, the galleries for potted flowers and smaller works of statuary; but care should be taken to consider the promenade as the chief feature, and not to occupy too much space with the collections. The public would desire to have walks among flowers and plants—not flowers and plants with some walks. This last kind of treatment belongs to Kew and Chiswick, and the Regent's Park. Spaces at the extreme sides of the building might be kept vacant to be applied to various public purposes, such as periodical exhibitions of agricultural produce, colonial raw produce, machinery, perhaps models of objects claiming patent rights, manufactures, and fine arts."

These ideas he, however, as we understand him, only offers as "supplementary to the great object of a winter garden;" and we are bound to say, that we doubt the wisdom of carrying them out, even if it were possible.

Mr. PAXTON, whose pamphlet we reprint in another column, entertains different views. He would have a garden or park, and noth-

ing more, embellished with birds, and flowers, and trees, and sculpture, displayed in a climate temperate at all seasons. HIC VER PERPETUM would be inscribed above his portals, and the scene within them would be that of a noble "park, decorated with the beauties of nature and art, under a sky-roof, having a climate, warmed and ventilated for the purpose of health alone, furnishing, close to their own firesides, a promenade unequalled in the world, and, for the six winter months, a temperature analogous to that of Southern Italy. Beautiful creeping plants might be planted against the columns, and trailed along the girders, so as to give shade in summer, while the effect they would produce by festooning in every diversity of form over the building, would give the whole a most enchanting and gorgeous finish."

Are these visions capable of being realized? That is the question which it really interests us to answer. The funds and means out of which a reality may arise are subordinate considerations, especially since the building, the main feature in any calculation of cost, may be said to be already paid for.

That all which Mr. PAXTON proposes to do may be easily done, no one acquainted with gardening will doubt; that the climate of Naples or Madeira may be secured to Hyde Park by means of the Crystal Palace, is as certain as the existence of those two countries. All we require in order to accomplish such an end is a heating power, which will exclude frost in winter, and a water power which will exclude drouth in summer. The rest is simple. That the great engineers who put together the vast fabric can water it and heat it, nobody doubts; that plants will thrive in it if heated and watered, we all of us know perfectly well.

But would such a winter garden be attended by the advantages that are expected from it to public health and convenience? That is to say, would it be agreeable to ride and walk under shelter while rain or snow is falling all around? Would it be comfortable to have a cool garden of 18 acres as a place of resort in the dog-days? Have dust or mud irresistible attractions to us English? These are matters of taste which all men can judge of for themselves.

If we look at the matter as it affects the value of contiguous property, then such questions as the following arise. Would it be advantageous to the neighborhood to be within a few minutes walk of Naples or Madeira? Would invalids find any comfort therein? Would the aged and infirm? And if health and comfort should be increased by turning the Crystal Palace into such a place as Mr. PAXTON contemplates, would the value of houses and land at Knightsbridge, Kensington, Brompton, and Bayswater, rise or fall? The owners of property there will probably express their opinion as to those points.

Should all these questions be answered in the affirmative, (and who can doubt it;) if the comfort, the health, the enjoyment, the wealth of the metropolis would be thus largely increased, by converting the Crystal Palace into such a park as could only be naturally found in Portugal or Madeira, then the last inquiry that we should make would be, WHO WILL RECOMMEND ITS REMOVAL, when a short Act of Parliament shall be introduced to enable it to remain where it is?—*Gard. Chron.*

WHAT IS TO BECOME OF THE CRYSTAL PALACE?—The time is approaching when the World's Fair will terminate, and the vast roof under which it is held, being no longer required for that purpose, must, according to the terms of agreement with the Commissioners of Woods and Forests, be removed; and, by this time next year, the ground is to be made as smooth, and the grass is to look as green, as before the 25th of September 1850. The exhibited articles will all be removed, and many of them will be looked upon as precious relics, connected with an event, the greatest of our times, and they will be cherished more and more as they become separated further from the day of their great triumph, whilst the building (I hope I may say without vanity)—the great feature of the Exhibition—must, if removed, be either transported to another country, or be rent asunder and dispersed in fragments to perform a variety of inferior offices. Now, if I can show—as I believe I can—good reasons why the structure should remain standing, I trust the Royal Commissioners will do all in their power to further that object.

Apart, then, from all thoughts of its present use, and also from all those considerations which fairly entitle it to great attention—the building, I would suggest, should be allowed to remain standing, on account of its peculiar fitness to supply a great public want, which London, with its two and a half millions of inhabitants, stands most essentially in need of—namely, a *Winter Park and Garden* under glass.

When I determined on sending in a design for the Glass Palace, I had in view quite as much the after purpose for which the build-

ing could be adapted as the object then more immediately required; and, in my original prospectus, I prominenty mentioned the fact, as one which had received a large share of my attention. Since that day nothing has transpired to alter my views, but, on the contrary, everything has contributed to strengthen and establish them, and to further convince me, if such further conviction had been needed, how valuable an appendage to this great metropolis would be a large national place of recreation and instruction, such as I propose.

Within the last twenty years, the physiology, economy, and requirements of animated nature, with the effects which climate, locality, and various contingencies have upon their health and habits, have been studied and examined, with the best results. Geology, closely connected with the study of plants, has, in its wondrous discoveries, unfolded to our view the mysteries of ages long gone by, when the earth's inhabitants differed widely from those now seen occupying its surface; of these no recorded history furnishes us with particulars, and but for this science we must have looked back thro' the thick mist of time, with scarcely a glimmering of light to guide us. By the aid of chemistry and botany many useful discoeries have been made, which practical horticulture has rendered subservient to the comforts and happiness of man; and the removal of the duty on glass has given an impetus to this science which only a short time ago no efforts could possibly have called into action; indeed, had that duty still existed, no building such as I am now treating of could possibly have been erected, and without an extensive use of glass, to equally admit and diffuse a subdued light, no such displays as at present could have been secured.

The achievements of horticulture, however, do not stop here, or merely consist in what has been accomplished within the great exhibition building, where dry and polished articles and the most tender fabrics may be safely preserved; but it leads onwards to the formation of climates, which even under opposite influences are rendered healthy, and suited to the wants and requirements of man. Formerly, wherever plants were congregated beneath a glass structure, the atmosphere was invariably deteriorated, and rendered unfit for being more than transiently inhaled; the usual method with visitors being to take a hurried view of the chief beauties within, and then retire to a more genial air. But now plant-structures are no longer unhealthy, pent up ovens; although the immense variety of objects they contain form a remarkable contrast with the meagre appearance of former collections, yet these objects are seen growing with an ease and natural vigor which, with the limited knowledge and means we possessed formerly, it was impossible to imitate. The ventilation and climate of our dwelling-houses have also been considered, and many additions to our comfort have in this respect been made. The perfection of these internal arrangements, contrasted with the atmosphere without, renders it still more desirable that something on a large scale should be done to counteract the effects of the outer air, which, in this country, and the neighborhood of London especially, is often during many months in the year impure, murky, and unfit for healthy recreation and enjoyment; and it is to meet this want that I offer the present recommendation. All hitherto erected structures, however great and noble some of them are, fall far short of answering this end, and I cannot but recommend, now that we do possess a building like the Crystal Palace, which in its dimensions is the best adapted for such a purpose of anything that has been hitherto attempted, that it should be so appropriated —and especially as its peculiar site between Hyde Park and Kensington Gardens is the best spot that could have been selected; connecting as it does those two great promenades—it appears exactly calculated to concentrate beneath its roof the pleasures of both.

A building like this, if properly laid out, will open a wide field of intellectual and healthful enjoyment; it will likewise, I hope, stimulate the wealthy in large manufacturing towns to a similar adoption of what may now be raised so cheaply; and when judiciously furnished with vegetation, ornamented with sculpture and fountains, and illustrated with the beautiful works of nature, how pure, elevating, and beneficial would its studies and exercises be. At present England furnishes no such place of public resort, for although Kew has a splendid Palm-house, where daily are congregated a great number of individuals, yet its warm and humid atmosphere is only calculated to admit of visitors taking a hasty view of the wonders of the tropics, as they pass in their walks through the gardens. On the contrary, in the Winter Park and Garden I propose, climate would be the principal thing studied; all the furnishing and fitting up would have special reference to that end,

so that the pleasures found in it would be of a character which all who visit could share; here would be supplied the climate of Southern Italy, where multitudes might ride, walk, or recline amidst groves of fragrant trees, and here they might leisurely examine the works of nature and art, regardless of the biting east winds or the drifting snow. Here vegetation in much of its beauty might be studied with unusual advantages, and the singular properties examined of those great filterers of Nature, which during the night season, when the bulk of animal life are in a quiescent state, inhale the oxygen of the air, whilst in the day, when the mass of animal existence have started into activity, they drink in the carbonic supply, given out by man and animals, which goes to form their solid substance, at the same time pouring forth streams of oxygen, which, mingling with the surrounding atmosphere, gives vigor to man's body and cheerfulness to his spirits.

In this Winter Park and Garden, the trees and plants might be so arranged as to give great diversity of views and picturesque effect. Spaces might be set apart for equestrian exercise, and for carriage drives; but the main body of the building should be arranged with the view of giving great extent and variety for those who promenade on foot. Fountains, statuary, and every description of park and garden ornament, would greatly heighten the effect and beauty of the scene.

Beautiful creeping plants might be planted against the columns, and trailed along the girders, so as to give shade in summer, while the effect they would produce by festooning in every diversity of form over the building, would give the whole a most enchanting and gorgeous finish. Besides these, there might be introduced a collection of living birds from all temperate climates, and the science of Geology, so closely connected with the study plants, might be illustrated on a large and natural scale, thus making practical botany, ornithology, and geology, familiar to every visitor.

The alterations necessary to the building itself, to produce the effects I have suggested, would not be many or cost much money. Shortly will be published by me a view showing how the whole may be finished so as to do away with all idea of smoke, chimneys, or other kind of nuisance. The details of the alterations necessary I do not propose to treat of now; but I may mention, for the information of those who live opposite the Crystal Palace, that I should recommend the wood boarding round the bottom tier of the building to be removed and replaced with glass; the present appearance of it is heavy, and gives anything but the idea indicated by its name; when glass is substituted for wood, the appearance will be marvellously changed; those who drive and ride in the park will even in winter see the objects within as they pass by, and the whole will have a light aerial appearance totally unlike what it has at present. In summer I should recommend the whole lower glass tier to be entirely removed, so as to give, from the park and the houses opposite the Palace, an appearance of continuous park and garden. Here I must state what I believe will be the position of those who live opposite the Crystal Palace. I fully admit they have just cause of complaint by having all the turmoil of so vast an undertaking as the great exhibition developed under their eyes and ears, with all its attendant inconveniences; but if the building is allowed to stand, and be adapted as I propose, the advantages derivable to them will fully compensate for all the evil they may have sustained in that respect. The boarding being all removed and glass substituted, they will have, within a few minutes' walk, a beautiful park, decorated with the beauties of nature and art, under a sky-roof, having a climate, warmed and ventilated for the purpose of health alone, furnishing, close to their own firesides, a promenade unequalled in the world, and, for the six winter months, a temperature analogous to that of Southern Italy; and I have no doubt the property in that immediate neighborhood would, from such an arrangement, considerably advance in value, because of the recreation and exercise afforded to the inhabitants and their families.

The advantages derivable from such an appropriation of the Crystal Palace would be many, and may be thus summed up. In a sanitary point of view its benefits would be incalculable. By its various objects it would produce a new and soothing pleasure to the mind. The great truths of Nature and Art would be constantly exemplified. Peculiar facilities would especially be given for the development on a large scale of the sciences of Botany, Geology and Ornithology. A temperate climate would be supplied at all seasons. Taste would be improved by individuals becoming familiar with objects of the highest order of Art, and by viewing the more beautiful parts of Nature without its deformities. Pleasant exercise could be ta-

ken at all times, and in every variety of weather. It would serve as a drive, for equestrian exercise, for a promenade, or lounge, and as a place which could at all seasons, be resorted to with advantage by the most delicate.

Although the Crystal Palace at present, with its magnificent display of useful and ornamental articles, is truly wonderful, yet if the building be converted into a Winter Park and Garden, and arranged as I propose, I feel confident it would become a still more extraordinary and beautiful object. These things all considered, I cannot help expressing an earnest hope that the building will be allowed to stand, and be converted to so laudable a use. The cost of forming it in the first instance, must entirely depend upon the extent to which my proposition is carried out. Should it be decided for the building to stand, and be so appropriated, a calculation of the cost could readily be given.

I have, however, thought it right to state what I believe would be the annual outlay, if the whole were kept in first rate condition and constant repair; of course, a less sum would be required if a high standard was not aimed at; and this yearly sum might be obtained either by a national grant, or by making the building itself self-supporting.

ANNUAL EXPENDITURE.

Labor, fuel, water, implements, gravel for walks, feeding and attendance, to birds, and general superintendence,	£8,000
Besides the above, constant painting and renewal would be required; for this a reserve fund should be provided, and by which the building might be renewed forever,	£4,000
Making a total of	£12,000

—*Joseph Paxton.*

SOME FACTS ABOUT THE ACTION OF COLD ON PLANTS.—Facts, however trivial in themselves individually, become in the aggregate of immense value in building up a theory or illustrating a practice; for we must recollect that a theory is as often the child of experience, as that practice is illustrated by it, although such may not appear evident at the moment. The action of cold on plants is of vital importance to the practical gardener, as well as interesting to the natural philosopher. The relation of temperature to the healthy development of vegetable life, is as yet but imperfectly understood. Every day, however, adds useful knowledge on this head to our acquired stock. In the early spring of 1846, a quantity of Geraniums and other soft wooded plants were despatched by railway, at the station of which they arrived safely enough, but having to be conveyed some 20 miles by waggon on a frosty night, and not being properly protected (although the baskets containing them were matted in the ordinary way,) they were completely frozen through when they arrived at their destination, by daylight in the morning. So much were they frozen, that the succulent tops for several inches, were apparently masses of ice, and nearly the whole of the leaves had suffered more or less. On the extent of the damage being known, the whole of the plants were quickly removed to a dark cellar; and, to make "assurance doubly sure," a covering of mats supported by a temporary frame-work, was thrown over them. Water, only removed from the freezing temperature, was freely applied to the foliage, and no light admitted for 24 hours. On removing them, the damage they had sustained was but nominal. Scarcely a leaf had suffered, except such as had been bruised in the unpacking. Every leaf or part of a leaf so damaged, had to be removed. Another instance:—On a festive night in midwinter, the person in charge of a conservatory forgetting, or by procrastination omitting to apply the necessary artificial temperature, to expel the frost, (for it had set in severe rather unexpectedly) found, on his entering the house at 4 o'clock in the morning, that the tender plants were much frozen. He applied fire to the boiler, raised the temperature a degree or two above freezing, and then liberally applied cold water with the syringe. The result was, that nothing beyond a few leaves on a stray shoot or so, evinced any damage, and by sunrise all was as promising as could be wished; so completely were the plants recovered, that the circumstances would never have been reported in the *Chronicle* had not the delinquent revealed the mishap after all danger of detection was past. One more:—A house of Geraniums was penetrated by the frost, the plants were much frozen, and the frost was on the increase when the circumstance became known in the morning. Cold water was in this case applied, but without the precaution of raising the temperature above freezing point. The result of course, was, that the water, as soon as it fell on the foliage, became ice, till the plant looked encased in candied sugar. The more water the greater evil. This detected, a fire was lighted, and the necessary temperature acquired, when the result was all that could be wished. Sunlight was prevented reaching the plants till a recirculation of the fluids had taken place. In all similar cases light should, if possible, be excluded; in fact, every in-

centive to a rapid reaction of the vital powers should be applied only in the most limited degree, increasing stimuli with the requirements of the plants, retarding rather than accelerating vital action. As regards the action of light on plants, a wide field is open to the ingenious experimentalist. Let a given number of plants be frozen; admit to some light in its ordinary condition, from others exclude the chemical ray; from more, both the chemical and heating ray; to others admit only the luminous, or vary its application in the many ways which will occur to the chemist. The result must be of importance alike to the gardener and the pure man of science. *G. L.—Gard. Chron.*

THE SCARLET GERANIUM AT SEA.—In the year 1825 I sailed for America in a ship conveying emigrants to Canada, all of them humble people from a rural district, to whom the inside of a ship or the waves of the sea were as strange objects as a sight of the man in the moon would have been, or a slice of the green cheese, of which, according to nursery traditions, it is composed. Fine hearty, sturdy country people they were, as rich in children as they were poor in pocket. Most of them had connexions in the land they were going to; but beyond a belief that there were no taxes in America, and consequently there could be no want, their ideas on the subject were vague enough. It was an amusing sight to an unreflecting young fellow, as I then was, to see their bits of furniture brought on board, the old carved chests containing their wardrobes, their various cooking utensils, and the little things with which they could not part, because "they had had them so long." Amongst these were various birds, a cat or two, and a dog; one little girl had a field-mouse in a cage; and a nice matronly woman had a Scarlet Geranium. Now my mother had been fond of Geraniums, and she had often permitted me when a child to water them as they stood near a spot where she was engaged with her household duties; so that it was like an old acquaintance, this said Geranium, in its green-painted tub. Its owner had been repeatedly told "it would die" on the voyage. "Never mind, then; let it die, so long as it dies with me," was her reply, as she fastened it up in a corner of the rude deck on which these poor emigrants were to live for seven long weeks. And so, with a strong breeze and a flowing sheet, we left the harbor together. The fair wind with which we sailed soon shifted into an adverse quarter, and off the coast of Scotland, (for we were going north about,) it became a dead *noser*, with all the usual amount of miseries.

To a set of poor country folk, what can exceed the miseries of the temporary lower deck of a collier, converted into an emigrant ship, hatches battened down, to keep out the washing seas or heavy rain, foul air, seasickness? Miseries indeed! The word as understood when applied to felons in goal, or paupers in a workhouse ashore, conveys no conception of the wretchedness in question. It was soon found of no use to contend with the violence of the elements; so, when things were at the worst, the captain ordered the helm to be put up, and we made a fair wind of it by running to the south. As soon as the ship was fairly before the wind, the hatches were unbattened, light and air were admitted, attempt was made to get things snug. As a sailor boy, part of this pleasing duty fell to my lot; and well do I remember the thoughts of my comfortable home which were awakened when, amidst the desperate confusion of that lower deck, the old Geranium caught my eye. It had flowers on when it came on board; they had soon fallen off; day by day it sickened and languished; the color went little by little out of its leaves; and then they drooped off altogether, and were succeeded by smaller and feebler ones, till at last all appearance of life had entirely vanished. Still it was kept. It had flourished for years in the cottage window of its owners, which looked out upon pleasant green fields. That cottage and those fields, now tenanted and tilled by others, still lived in their recollection, and were associated no doubt, with the plant in question. And so it went with us; crossed the wild dark ocean, accompanied us up the St. Lawrence, and there we parted, for it went ashore with its owners. Yet I saw it once again; for being on shore upon some duty, I went upon Goudie's wharf, where I found a family group sitting upon their effects preparatory to embarkation up the river in a steamboat. They were part of our emigrant passengers. And standing by the side of their bedding and boxes was my old acquaintance, the Scarlet Geranium—dead, dead—looking as hopeless and miserable as the unhappy exiles themselves. But if, as I have little doubt, they have long ere this made for themselves a happy and independent home in the western solitudes, it may be hoped that with the Scarlet Geranium they did not lose the last link which bound their affections to their father land.—*The Florist, Fruitest, and Garden Miscellany for Jan.* 1851.

Domestic Notices.

Mr. Glover's Model Fruits.—Our neighbor, Mr. Glover, Fishkill Landing, N. Y., who is both an artist of talent, and a zealous amateur of horticulture, has turned his attention, for some three or four years past, to the production of fac-similes of fruits and insects. After a long course of experiments, he has succeeded in making a composition for modelling fruits, which possesses much more of the truthfulness of nature, than the usual wax imitations, together with that *durability* in which the wax models are wholly wanting.

Mr. Glover has for some time past been endeavoring to give a practically useful turn to his efforts in this department, by taking casts of all the principal varieties of standard fruits cultivated in this country, with a view to the formation of *Pomological Cabinets* for Horticultural Societies. As the specimens are cast in moulds made from the very fruits themselves and colored after nature, the most perfect accuracy is, of course, obtained. A society in possession of one of these Pomological Cabinets, would have always at hand an authentic specimen or model of the leading sorts to refer to, when the fruit itself is not in season—thus settling a host of disputes among the members who trust to memory.

The advantages of this will be apparent to every pomologist, and the beauty and appropriateness of the collection would commend it to members of the Society not directly interested in its utility.

Mr. Glover's collection, though now very large, is daily increasing by casts from new varieties, and begins to attract considerable attention. The N. Y. State Agricultural Society, and the Massachusetts Horticultural Society, have ordered the Pomological Cabinets from him, and we have no doubt Mr. Glover will find calls made upon him from other quarters, both public and private. Nurserymen having new varieties of merit, not known to their customers, will find a model by Mr. Glover, a great help to verbal description.

The Augusta Rose.—Some of our readers may remember an account of a new yellow climbing rose, a seedling, described under this name in vol. 4, p. 147. This rose, as we understand, has not yet been sent out, but the whole stock of it is in the possession of Messrs. Thorp, Smith, Hanchett & Co., of Syracuse, N. Y.

We have just received by express from these nurserymen, a small box containing a branch of the Augusta Rose in good order, and are glad to bear testimony (as far as a single cluster of cut flowers will allow us,) to the beauty of this new variety. The flowers are a fine yellow, deeper than Cloth of Gold, and deliciously fragrant. We learn from those who have seen this new American seedling growing, that it is a fine vigorous climber, with an everblooming habit—and have no doubt that it will prove a great aquisition. Messrs. T., S., H. & Co., write us, that "mere cuttings struck in March and April—some of them not more than six inches high, are now in full bloom. Every new shoot blooms freely."

Princess Alice Maud Strawberry.—As one of the objects of the Horticulturist, is the dissemination of correct information in respect to the varieties and character of fruits, I propose to give what I have reason to believe is the true history, at least in part, of the Princess Alice Maud Strawberry. In an article "on Strawberries and their culture," in the last number of the Horticulturist, by Dr. Hull, of Newburgh, it is stated that "a plant which has gained great reputation in our neigborhood, under the name of Alice Maud, has proved, under Mr. Downing's examination, to be identical with Willey." It is there classed as a pistillate variety. This, of itself, is sufficient proof that it is not the true variety, for the Princess Alice Maud is a perfect staminate plant, with a very large and beautiful flower. It is of English origin; and in the same number of the Horticulturist, under the head of "Foreign and Miscellaneous Notices," is an extract from the Florist, p. 337, where this variety, among others, is "recommended as the best, by Mr. Whitney." This character is fully sustained in this part of the country.

This variety may have been imported by persons in other sections, but all under that name here, were obtained from JOHN SLATER, an Englishman, and now a market gardener in the vicinity of Alexandria, Va., who imported them from England a few years ago, and disseminated them amongst us.

He cultivates the strawberry largely, for the supply of Washington market, and prefers this variety before any other, as with him it is more productive than any he has cultivated. This opinion is sustained by Dr. BAYNE, of the same vicinity, who, by the bye, not only cultivates fruit largely, but is an excellent judge of such things. He not long since considered Hovey's Seedling as the best variety for him, but now acknowledges that the Princess Alice Maud is the best market fruit, and he cultivates largely for market; whether this character will be sustained in all soils remains to be seen. The soil of both Dr. BAYNE and Mr. SLATER'S gardens is a fine sandy loam, interspersed more or less with rounded pebbles and gravel, similar to much that is met with in the vicinity of tide water rivers. The ground of the latter is but a few feet above tide, while the former is, perhaps, as high as 150 feet.

This strawberry is a strong grower, and succeeds best in rows, say two feet apart; the flowers very large staminate, fruit conical, color darker than Hovey's Seedling, and more glossy, flavor more sprightly, and a more abundant bearer. YARDLEY TAYLOR. *Loudon co., Va., 8th mo., 9th.*

[Our correspondent is quite correct in his account of the Alice Maud Strawberry—an English variety of excellent qualities, well known in this state also—the blossoms staminate, and the flavor delicious. Dr. HULL did not intend it to be understood that he supposed the pistillate strawberry described by him, to be the Alice Maud—he only mentioned the fact that it had been wrongly disseminated under that name. ED.

PRESERVING FRUITS AND VEGETABLES.—I observe in the June number of your paper, a correspondent, L. of S. C., making inquiries as to the best way of preserving *fresh* for a length of time, fruits and vegetables. He is right in all his preparations, except that instead of putting them in *boiling* water, he should put them in *cold* water, with a quick fire, and just allow it to come to the boiling point, and no more; at the moment the water boils seal up the cans hermetically. I will except corn, which should boil two minutes, and should be cut from the cob before putting in the cans. I am a greater part of my time from home, and cannot give much time to writing. Otherwise I should have written more in detail about this mode of preserving fresh fruits, vegetables, &c. Very resp't yours, J. C. WRIGHT. *Scottsville, Albemarle county, Va.*

CULTURE OF ACHIMENES.—What is the proper manner of wintering Achimenes? Last autumn, after the leaves had died down, I put my pots away on a back shelf of the greenhouse, in a warm part, out of the reach of frost, and gave them no water all winter. When I came to repot them in the spring, the tiny bulbs or tubers had all disappeared, not one to be found; this treatment is evidently wrong. How must I proceed to winter these pretty plants, in the event of procuring a fresh supply? Yours, &c. FAIRYMEAD. *Canada East.*

We suspect, from having seen such things before, that your disappointment in not finding the bulbs of the Achimenes where they should have been, for the spring repotting, was owing to the plants having been exposed to a slight frost in the autumn before they were housed. The bulbs are found very near the surface and a single cold autumn night is sufficient to destroy them. Your manner of wintering them is the correct one, and the disappearance of the bulbs must be either owing to frost or mice. ED.

PEACHES AND NECTARINES ON ONE TREE.—SIR: To verify the statements made to you the last season, and which you were kind enough to place in the columns of your Journal—having reference to the peach and nectarine growing upon the same stock, I yesterday visited the tree, in the nursery grounds of Mr. DUNCAN C. WOOD, in this vicinity, and ascertained that the statement was correct in every particular—confirmed by another year of growth—peaches and nectarines growing on the twin stems. I examined the root, also, finding they came from the same *stone* or *pit*, spoken of in that communication. The peach given to Mr. WOOD by

his countryman, Mr. Buchanan, from the yard of Mr. Charles Tompkins, all of this city.

I have again conversed with each of the persons named, and find the facts precisely as I have stated them.

I take the liberty of again noticing these facts to you, as the season for peaches and nectarines is approaching. I do so, as there are doubters to such unique freaks of dame Nature, in all parts of our land. Yours, &c., J. Bingham. *Hudson, July* 24, 1851.

New-Jersey Horticultural Society.—The annual exhibition of the above Society, will be held at Jersey City on the 24th, 25th and 26th Sept. A liberal schedule of premiums is offered on fruits, flowers, and vegetables, which is open to competitors from all parts of the country. The various lines of conveyance will afford every facility for transporting articles intended for the exhibition, and the central position will doubtless bring together a collection of rare objects of interest to the horticulturist. Contributions of every species of horticultural and floricultural produce are earnestly solicited. Articles intended for the exhibition may be directed to the "N. J. Horticultural Exhibition, Jersey City," and will be received by the proper committee. All articles intended for the exhibition must be delivered at the Hall before 12 o'clock on Wednesday, Sept. 24th. Ira B. Underhill, Rec. Sec.

☞ The Grand Autumnal Exhibition of the Pennsylvania Horticultural Society, will be held in the Museum building, Philadelphia, on the 17th, 18th, and 19th of September.

☞ The annual exhibition of the *Albany and Rensselaer Hort. Society*, will be held in the old State Hall, on the 10th and 11th days of September—that of the *Rhode Island Hort. Society*, will be held at Providence, on the 10th, 11th, and 12th of Sept.—that of *Cinnati*, Ohio, takes place on the 1st, 2d, and 3d of October.

Pennsylvania Horticultural Society.—The stated meeting of this Society occurred August 19th, in the Chinese Saloon, Philadelphia. The President in the chair. The Hall was much crowded with the beauty and fashion of the city. Every visitor was highly gratified with the display. The object of the greatest attraction, and it assuredly merited all the admiration bestowed upon it, was the leaf of the far-famed *Victoria regia*, or great water lily, from the hot-house of Caleb Cope, the President of the Society. This leaf was six feet four inches in diameter, or nineteen feet in circumference; of circular form, peltate, emarginate at that portion of the border which was the point of its orignal sagittate shape; a similar notch existed directly opposite, where a suture occurs, which latter is caused by the adhesion of the lobes of its arrow-headed form; the venation was remarkably prominent, and beset with sharp spines, as also was the rope-like petiole; the whole of the under surface was of a beautiful purple tint. The flower bud not having expanded, was not shown; as buds are observed issuing from the plant, it is hoped and confidently expected, that flowers may be seen at the grand autumnal display, commencing on the 17th September. A representation in wax, of the flower, obtained by A. Kimber in Europe, was exhibited. A choice collection of flowering plants, from Robert Buist's, were presented. Fine baskets of choice cut flowers, from Jno. Ellis, gardener to Caleb Cope, Henry A. Dreer, and Robert Kilvington, were seen.

In fruits the display was really very fine. Of grapes, there were seven contributions, consisting of Black Hamburgh, White Chasselas, Cochin China, White Frontignac, Golden Chasselas, and a collection consisting of many varieties. Nectarines were brought from green-houses, of the Elruge, Vermash, new White, Red Roman, Pitmaston, Orange, and other varieties. Of plums, there were six contributors, and the kinds shown were the Marston, Green Gage, Mammoth, Quetch, Blue and Cleavinger. Highly flavored Cayenne Pine Apples were from the President's houses. Delicious peaches of the Crawford's Early, the Heath, free, and a seedling variety, were seen. Of pears, there were from one source eight kinds—the Bartlett, Callot Rosat, Washington, Bezi de la Motte, Chaumontelle, Moyamensing, Andrews, and Ah mon Dieu, and the Dewitt, Bartram, Rousselet de Rheims, Seckel, and a seedling, and the Esperion, St. Ghislain, and three unknown French kinds; the Andrews, Duchess de Berri, the Dearborn's Seedling, the Julienne, the Ear-

ly Catharine, Seckel and Gratz. Of apples, the following varieties—Pearmain, Maiden's Blush, Porter, Hagloe, and Hawthornden. Several new varieties of melons were brought forward. Three fine displays of vegetables were shown.

The committee on fruits submitted a report of fruits examined ad interim—viz: Fine specimens of the Bloodgood, Dearborn's Seedling, Ananas d' Ete, Benoist pears, from Charles Downing, Newburgh, N. Y.; the Gratz, Mather and Ott pears, and Cleavinger plums. The Bloodgood, Dearborn's Seedling, Ananas d' Ete, and Benoist, were of the finest quality; the last were particularly fine. The Gratz was of good quality, and believed to be synonymous with Julienne. The Mather is a large, fair native pear of Delaware county, of great productiveness, but wants flavor. The Ott, as heretofore, sustains its high reputation, excelling in quality all the summer pears. The Cleavinger is a native purple plum, free, of the largest size, and of good flavor. THO. P. JAMES, *Recording Secretary.*

RIPENING AND PRESERVING FRUIT.—At a meeting of the Massachusetts Hort. Soc., May 31, the following report from the Fruit Committee was read by the Chairman, accepted and ordered to be printed.

The Fruit committee, to whom a communication from Mr. Daniel T. Curtis, in respect to a method discovered by him for ripening and preserving fruits, has been referred, ask leave to report at this time but in part, upon the subject committed to them.

Specimens of fruit, consisting mainly of pears, have repeatedly, during the past year, been placed upon the tables of the Society, by Mr. Curtis, that had been preserved by him for a long time after their usual period of maturity, that were found on examination to be perfectly sound, and, in some instances, to have retained unimpaired their juice and flavor. Among these pears were specimens of the Seckel, Bonne Louise de Jersey, Duchess d'Angouleme, and Easter Beurre. The Seckels, though a kind peculiarly subject to early decay, were perfectly sound, and retained in perfection the peculiar flavor of that variety. Of the other varieties, the specimens exhibited were generally, though sound, insipid and tasteless, arising from the circumstance, as Mr. Curtis stated, and as their appearance indicated, that they were, when packed, and subjected to his process, immature and imperfect.

These pears were exhibited by Mr. C. as late as January and February, months after their usual season of ripening, thus proving, as no signs of decay were visible, that their season could be almost indefinitely prolonged.

Mr. Curtis has sent pears preserved and packed in his peculiar method, to the Havana, to London, and San Francisco, thus subjecting his method to the most severe trials.

The following extract from a letter from his correspondent at Havana, shows the result of the experiment, as far as the shipment to that city is concerned: "The pears arrived in perfect order; they were delicious. I never thought they could be eaten in so perfect a state, except in the country where they grow."

The Gardeners' Chronicle of April 5th, states, that at the Exhibition of the London Horticultural Society, April first, a box of 15 Easter Beurre pears, received from Mr. Curtis, of Boston, were exhibited; that cases containing seven of these pears were opened, and of them, four were found to be decayed, and three good; and then states, "These pears were stated to have been ripened by a method peculiar to Mr. Curtis, the nature of which was not explained. They were, for the most part, melting, sweet, and perfectly ripe, a condition which this fruit with difficulty attains with us in England." The society awarded Mr. Curtis its Knightian medal.

The California Daily Courier of April 9th, acknowledges the receipt, through Mr. D. H. Haskell, of Adam's Express, of a "magnificent pear, as sound as when packed at Boston." The Pacific News, and Alta California, and other San Francisco papers, make similar acknowledgments, and all concur in stating that the pears were perfectly sound, and that as they were sent for the purpose of testing the practicability of sending fruit to California, across the Isthmus, speak of the experiment as successful. The pears were shipped at Boston, January 27, and after a detention of 70 days, arrived in California in April. The papers referred to state, that the pears, though sound, were deficient in flavor, a circumstance to be imputed, as with those exhibited to the Society, perhaps to the immature and imperfect state of the fruit when shipped, and not to the effect of the passage, or a difference of climate.

From the facts now detailed as well as from their own observation, your committee feel justified in expressing a confident opinion, that after many unsuccessful trials of various processes and different methods, Mr. Curtis has succeeded in discovering a method of preserving fruit for a very long, if not for any desired period, and that this method is capable of a practical application.

Although Mr. Curtis has, as he states, preserved other varieties of fruit besides pears, yet so far as the personal knowledge of the committee extends, the fruit subjected to his process has thus far been mainly of the latter description, and they feel, before arriving at a conclusive opinion respecting the value of this discovery to the Society, experiments with other species of fruit, as peaches, plums, &c. &c.,

should be made, and opportunity be offered for their examination, after being subjected to the process. With a view to the gratification of the committee in this particular, Mr. Curtis is about commencing, under their inspection, some experiments with the early and soft fruits, to be continued with other kinds, as they come into season.

In addition to the discovery of a mode of preserving fruit, Mr. Curtis seems also to have succeeded in finding out a process by which such varieties as are difficulty to ripen, may be brought to perfection,—a discovery of almost as much interest to cultivators, as that by which the season of all varieties is so greatly prolonged and their safe transmission to distant places secured.

That the discoveries of Mr. Curtis are important, and that he is justly entitled to an honorary and pecuniary recompense at the hands of the Society, as well as that a knowledge of the process should be, if possible, procured for the use of its members, your committee entertain no doubt, and they believe that it will be but fulfilling some of the objects for which it was instituted, in testifying by such recompense, a proper appreciation of the merits and discoveries of Mr. Curtis, and in procuring for the public the means of availing itself of the advantages to be derived therefrom.

Under existing circumstances, however, while they wish now to place on record such evidence of the claims of Mr. Curtis as is afforded by this expression of their opinions and statements of facts, your committee are of opinion that the final action of the Society, in relation to this matter, should yet be delayed until the result of the experiments referred to are ascertained, and such further information with respect to the expense attending the process and the mode of practicing it procured, as will enable them, in view of the beneficial results of which it is capable, the better to recommend, and the Society to adopt, such measures in relation to these discoveries, as Mr. Curtis seems to deserve and its own interest to demand.

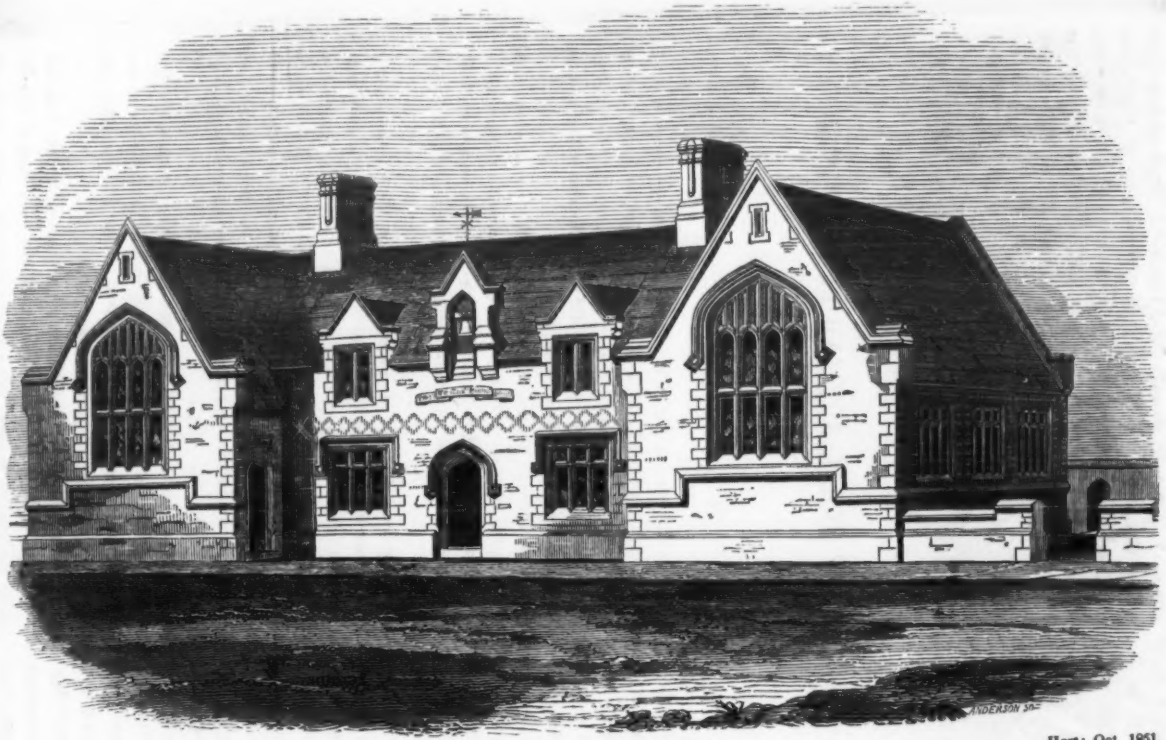
With these views, your committee ask that the whole subject may yet be left in their hands, and that further time be allowed them to consider what action it is proper that the Society should take in reference thereto. Joseph S. Cabot, Chairman.

White Blackberries.—They were first grown in the garden of Mr. J. S. Needham, West Danvers, and seem to possess some remarkable characteristics which eminently entitle them to general cultivation. The first specimens of this new species were exhibited in Boston the last season, and were pronounced by competent judges, a curiosity, as well as a most palatable fruit; in which opinion I think you will fully concur. The original plant was discovered growing wild in the midst of a blackberry patch in the State of Maine; and this year, for the first time, it has fully demonstrated what it is capable of producing under garden cultivation. It is a tall, upright bush, growing to the height of four and five feet, and is prolific to an extent scarcely credible to one who has not seen it in bearing. The bush from which these, which I send you, were picked, produced *eleven quarts* of marketable berries! The size as well as the quantity of the fruit would doubtless have been larger, if nearly half of the fruit had not been removed in the spring in separating the shoots from the parent stock, for the purpose of propagation. Besides being a great bearer the plant is hardy and needs no artificial protection during the winter.

The flavor of the high blackberry is well known to be greatly superior to the common low blackberry; yet every cultivator is aware that, except in some favorable localities, the high blackberry is a shy and capricious bearer, and unworthy of his attention. When brought under garden cultivation that plant grows rank; but the few berries which it bears are ill-formed, hard and bitter. All these objections this new species obviates, and promises to bring their delectable fruit into general cultivation.

Mr. Needham has in his possession the original plant, and all that have been propagated from it; and in the spring he hopes to be able to supply demands for them from abroad. A visit to Mr. Needham's garden would richly compensate one curious in such matters, for his trouble. The cold weather of the past week has given some of the specimens I send a darker color than naturally belongs to them. The berry is usually as light colored and transparent as a sweet-water grape.—[*Boston Jour.*

A New and Valuable Cherry.—We received of James Hyde & Son, nurserymen, Newtown Centre, a lot of fine cherries on the first day of August, which from its lateness and superior quality, we think will be a valuable acquisition. It originated in that neighborhood. The fruit is medial size; obtuse heart shaped; dark red and mottled, light amber in the shade; stem rather short and slim; flesh soft, tender, very juicy, sweet, rich, and delicious; stone small; ripe the first day of August.—*N. E. Farmer.*



A Design for a Village School House.

Hort: Oct. 1851.